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ASEAN-CHINA ECONOMIC RELATIONS

Developments in ASEAN and China

Edited by
Chia Siow Yue
Cheng Bifan

Institute of World Economics and Politics
and
ASEAN Economic Research Unit
Institute of Southeast Asian Studies

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Foreword

ASEAN-China economic relations is an area of considerable significance. Indeed, if anything, this significance has been increasing in recent years. Yet this relationship remains poorly understood, particularly in terms of the overall issues involved and their implications for individual countries and the region as a whole. It was partly to correct this state of affairs and to put ASEAN-China economic relations in their proper perspective that a group of ASEAN and Chinese scholars came together in April 1985 to plan a three-year research project on "ASEAN-China Economic Relations". Three themes were identified: Phase I — ASEAN-China Economic Relations: Trends and Patterns; Phase II — Developments in China and ASEAN and Their Implications for ASEAN-China Economic Relations; and Phase III — ASEAN-China Economic Relations in the Context of Pacific Economic Development and Co-operation. The Institute of Southeast Asian Studies, Singapore, and the Institute of World Economics and Politics, Beijing, are the co-ordinating institutions for ASEAN and China, respectively. Dr Chia Siow Yue is the Co-ordinator of the ASEAN aspects of the project and Mr Cheng Bifan, the Chinese aspects. Both Dr Chia Siow Yue and Mr Cheng Bifan are also the joint editors of the publications emanating from the project, with Dr Chia being responsible for the English edition and Mr Cheng Bifan, the Chinese edition.

The papers of the first phase of the project were presented at a workshop in Singapore in June 1986, and published under the title *ASEAN-China Economic Relations: Trends and Patterns* in October 1987. The research findings of the second phase were presented at a workshop in Beijing in October 1987. It is hoped that this second volume, *ASEAN-China Economic Relations: Developments in ASEAN and China* will also be useful to scholars and policy-makers concerned with ASEAN-China economic relations. The project on "ASEAN-China Economic Relations" has benefited immensely from the contributions of all participants, and from the financial support provided by the Ford Foundation and the International Development Research Centre, Canada. The Institutes would like to record their appreciation of all this assistance and support. Responsibility for facts and opinions expressed in these volumes rests exclusively with the individual contributors, and their interpretations do not necessarily reflect the views or policy of the Institutes or their supporters, or the editors.

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Economic Reforms in China and Their Impact on China-ASEAN Economic Relations

Yang Deming, Yu Yunding, and Shen Huasong

I. Introduction

Since its inception in 1978, China's economic reforms have attracted world-wide attention. Their successful implementation is not only crucial to the development of China's domestic economy, but also highly significant in promoting China's economic ties with foreign countries. The ASEAN countries are China's close neighbours, with whom China sincerely aspires to promote vigorous economic relations on the basis of equality and mutual benefit. This relationship hinges upon numerous factors, the most important of which are: firstly, the economic policies, structures, and development of China and the ASEAN states; and secondly, the pattern and development trends in the world economy. China's economic reform, a most assiduous, complex, and time-consuming undertaking, constitutes a long-term factor that will affect the economic relations between China and the ASEAN nations. What is the nature and trend of China's economic reform? And what impact will it have on prospects for China-ASEAN economic relations? These are matters of general concern to the ASEAN countries.

This paper is divided into three parts: first, an overview of China's economic reforms; second, China's economic structure and related policy reforms; and third, an analysis of the impact of China's economic reforms on China-ASEAN economic relations.

II. An Overview of China's Economic Reform

The economic reforms in China involve two interrelated aspects of structural and policy reforms, with focus on the former. The original economic structure characterized by centralized economic planning took shape in the late 1950s. The merit of such a structure lies in its centralized and unified planning which facilitates the mobilization of vast human, material, and financial resources for major projects vital to the national economy and the people's livelihood. It played a significant role in laying the foundation for China's socialist industrialization

and in setting up an independent and comprehensive system for the national economy. Yet it also had serious flaws, manifested mainly in: excessive concentration of economic decision-making power; over-emphasis on mandatory planning; neglect of the development of the commodity economy and the regulatory role of the market; and lack of enterprise vitality and low economic returns. The basic goal of the economic reforms since 1978 has been to create a new economic structure that is a planned socialist commodity economy based on public ownership suited to actual conditions in China through the elimination of the above-mentioned defects.

The economic reforms first began in the rural areas in 1978 and centred on a household contracted responsibility system linking remuneration to output, putting an end to the prolonged stagnation of the rural economy in a short span of time. Their success laid a solid foundation for a comprehensive reform of the nation's economic structure, with focus shifting to the cities. The major elements of these reforms are: (1) invigorating enterprises into efficient economic entities enjoying relative managerial independence; (2) further expanding the socialist commodity markets along with a gradually improved marketing network; and (3) establishing a new socialist management system with gradual shift away from direct towards indirect state macro-control. Around these three core areas are supporting reforms in planning, pricing, finance, the fiscal system, labour, and the wage system. Together, these function as a complete set of macro-economic control mechanisms capable of combining planning with market regulation, and micro-flexibility with macro-control. This will, in turn, make it possible to harmonize the interests of the state, the collective, and the individual and thus bring about the virtuous circulation of the entire national economy.

1. Invigorating the Enterprises

Under the old economic structure, enterprises were no more than "appendages to state administrative organs", bereft of decision-making power and managerial vitality, resulting in micro-structural rigidity and low economic efficiency. Invigoration aimed at turning enterprises from administrative "appendages" into socialist producers and distributors of commodities enjoying relative autonomy in management and bearing full responsibility for their profits and losses. Therefore, enterprise stimulation constitutes an essential part of the nation's economic restructuring. For this, the Chinese Government has, in recent years, adopted a variety of policies and measures and carried out many experiments. These include, among other things, the following:

(1) *Delegating more decision-making power to state-owned enterprises.* The principal measures are: (a) to stipulate that enterprises be entitled to sell their excess state-quota products to meet market demands; (b) to retain a portion of their profits instead of transmitting them all to the state which took care of their wages, income and expenditure, and profits and losses; and finally, (c) to use their funds, appoint and remove middle-level cadres, and recruit workers and staff personnel.

(2) *Introducing an economic responsibility system.* This refers to a management system that will enhance enterprises' socio-economic results under the guidance of state plans and integrate authority responsibility and benefits into an organic whole. Such a system may help eliminate the egalitarian defect of "everybody eating from the same big pot" among enterprises and among workers and staff, in disregard of their performance. Responsibility here has a dual implication — responsibility in terms of the state-enterprise relationship in the form of profit retainment, contracted profits, and losses; and responsibility in terms of intra-enterprise relationship, with rewards based on performance, piece-rate, and floating wages and for overfulfilment of production quotas, and so on.

(3) *Tax-for-profit schemes.* Under this scheme, enterprises pay taxes, rather than transferring all profits to the state, according to related taxation regulations. State-owned enterprises are now required to pay three types of taxes: product taxes or income taxes on net profits, resource taxes, and adjustment taxes meant for rationalizing after-tax net income across similar enterprises. The problem with adjustment taxes is that there is as yet no uniform tax rate. The amount of profits the enterprise delivered to the state in 1983 is taken as the base figure.

(4) *Expanding lateral economic ties between enterprises.* This refers to the removal of existing barriers between the different types of ownership, regions, departments, urban and rural areas, and military and civilian sectors, and fostering co-ordination among specialized departments in production, marketing, use of funds, technological development, and labour administration so as to gradually form various enterprise groupings and cartels.

In accordance with the principle of separation of ownership and managerial authority, various types of contract responsibility systems, such as leasing and the managerial contract responsibility system, are being implemented on a trial basis, depending on the nature, size, and technical features of the enterprise concerned. However, whatever the type adopted, the relationship of authority, responsibility, and benefit (between state and enterprise, and between owner and manager of the enterprise) should be formally defined in a contractual form, and management performance taken as the basis for rewards and penalties. Meanwhile, reforms related to the ownership of the enterprise through shareholding are also implemented on a trial basis.

During the Seventh Five-Year-Plan period (1986–90), the government will continue to adopt vigorous measures to further enhance the vitality of enterprises. These measures include:

1. Further streamlining of administration and delegating more power to lower levels. In principle, ministries and commissions under the State Council, provincial governments, and governments in the autonomous regions should no longer directly control enterprises. In cities, a clear distinction must also be drawn between the responsibilities and functions of the government and those of the enterprises.
2. Appropriately reducing the size of accounting units in large and medium-

sized state enterprises and introducing a layered management system with division of decision-making power and turning over some small state-owned enterprises to collective or individual management through a multiformed property-related managerial responsibility system such as contracting or leasing;

3. Adjusting the policies toward large and medium-sized enterprises and collective and individual enterprises in urban and rural areas concerning planning, tax, credit, and management to allow all enterprises to compete with one another on an equal footing;
4. Gradually implementing the system where the factory director (manager) assumes overall responsibility and transforming the enterprise leadership set-up by introducing, on a trial basis, the system of board of directors or management council; and
5. Having the overwhelming majority of enterprises bear full responsibility for their own profits or losses by the end of the Plan period. Enterprises that have been badly managed should be shut down or production suspended, merged, or shifted to other lines of production.

2. Establishing and Improving a Socialist Market System

To establish such a network means that it is necessary to set up and open up markets of all kinds, such as consumer goods markets and markets for means of production, for funds, and for labour, etc. It also means that China should undertake reforms on pricing and price control systems. In doing so, the principal goal is to break down the barriers between departments and between regions, and open up markets in provinces, autonomous regions, municipalities, townships and villages, with a view to forming an integrated socialist market, and improving it over time.

Establishing an Integrated Network of Socialist Markets

The first major step in setting up such a network has been the transformation since 1978 of the system of commerce and the institution of a new system under which the state, collective, and individual businesses coexist. State commerce, which used to be under the system of unified purchase and supply of goods by the state, is now run on a flexible multi-formed management, encompassing state monopoly of purchase, planned purchase, ordering, selective purchase, commissioned selling, acting as a dealer, etc. Supply and marketing co-operatives in rural areas have restored their co-operative character and are evolving into all-trade shopping and service centres. Trade centres that have broken down the confines of administrative subordination are on a trial run to transform the wholesale set-up. State commercial enterprises have begun to implement the economic responsibility system that combines authority, responsibility, and benefit in place of the old management system that was based on unified state planning for revenue and expenditure. A series of measures have been taken in the past few

years to establish and expand markets for consumer goods, means of production, funds, technology, and labour.

Consumer Goods Market. The old practices of planned purchase, assigned purchase, and planned purchase combined with exclusive marketing of consumer goods were abolished, and markets of various kinds were set up. These drastically reduced the items of consumer goods under planned distribution thereby enlarging the scope of market regulation. Meanwhile, various kinds of trade centres, wholesale markets, markets for small articles of daily use, and agricultural produce markets have also been set up. It is necessary to perfect the contract system for purchase with regard to a small number of agricultural and sideline products, while setting up all kinds of wholesale markets to facilitate access to large quantities of farm and sideline products to urban markets. Efforts are made to enlarge the markets for industrial consumer goods through varying forms of purchase and marketing such as planned purchase, ordering, selective purchase, commissioned wholesale and marketing, and joint industrial-commercial management and marketing. To increase commerce channels, introduced on a trial basis are new-type commercial enterprises that are inter-regional, inter-town and country, and inter-municipality and that combine agriculture, industry, and commerce, agriculture and commerce, industry and commerce, or commerce in different areas and trades.

Market for Means of Production. It is imperative to gradually reduce, depending on the merits of each case, the number of items and the proportion of the materials allocated under the state plan and to transform the old system by which the major means of production were allocated by the state according to plans. The means of production will be distributed in three ways in the light of their importance to the national economy and of supply and demand: planned state allocation, preferential ordering, and free purchase and sale. Materials that are in short supply but are essential to the national economy and the people's daily needs will continue to be allocated under state mandatory planning at unified prices set by the state or at prices floating within a specified margin. For materials that are in short supply but are expected to be in better supply, the portions available for free purchase and sale should be properly increased. The state must gradually eliminate the practice of unified allocation for those materials whose supply and demand are basically balanced. With regard to ordinary means of production for free purchase and sale, the state only sets quotas under guidance planning.

Another important measure taken for market improvement is the formation of a nation-wide network of material distribution with supply and marketing set-ups (material exchange centres or material markets) managed by economic regions and mainly based in cities, and the gradual reformation of the old closed system of material distribution which was characterized by vertical and horizontal barriers between departments and institutions and managed by administrative departments and regions. At present, the market for machinery and electrical equipment has been completely decontrolled. Cement and timber markets have

taken shape; coal and steels markets have also expanded. A pressing problem regarding the setting up of markets for the means of production is the so-called "dual-track" system, that is dual prices for means of production. Most means of production have two prices — market price and planned price — the former usually being much higher than the latter. This paves the way for profiteering and results in irrational allocation of means of production.

Market for Funds. Reform in the monetary system is a prerequisite for the establishment of a market for funds. China has already set up a banking system with separation of the administrative function and business management. In addition to the People's Bank of China which functions as the country's central bank, there are such specialized banks as the Industrial and Commercial Bank of China, the Agricultural Bank of China, the Bank of China, and the People's Construction Bank of China. Preparations for setting up other monetary institutions, comprising mainly collectively-owned financial institutions, are under way. This is aimed at establishing, step by step, a new socialist banking system having multi-formed monetary institutions with the People's Bank of China playing the leading role and all specialized banks forming the backbone. Through the reform, the banks have expanded the scope of their business, including issuing loans for circulation and fixed funds, initiating commercial and consumer credits on a trial basis, resuming the insurance business, and engaging in inter-bank borrowing and lending. Reforming the system of interest rates will enable the interest rates and other monetary mechanisms to play a more effective role in macro-economic regulation. At the same time, financial institutions will try out, as in enterprise management, independent business accounting and self-responsibility for profits or losses.

Building on the reform in the banking system, China is making intensive efforts to establish a market for funds to change the traditional practice of distributing funds in a planned way. This involves two courses of action. The first requires setting up a market for short-term funds. Banks are engaged in short-term financing to fund enterprise reform through inter-bank borrowing and lending, commercial papers, bill acceptance and discount, supplier's credit, financial leasing, commissioned advances, commissioned receipts and payments, among others. The second necessitates starting a market for long-term funds, including shares and bonds, and at the same time opening up a market for foreign exchange adjustment.

Market for Technology. Business activities in the technology market include compensatory transfers, technology contracts, technological consultancies, technical services, etc. China has been engaged in these activities in recent years and will do better during the Seventh Five-Year-Plan period. Moreover, it is prepared to gradually set up both nation-wide and regional fixed markets for technology. It will also gradually ensure that research findings in applied science be used in commodity production and enterprise management be adopted by research institutions of applied sciences.

Reform in the Labour System and Gradual Establishment of a Socialist Market for Labour. The primary objective of this reform is to abolish the old system of labour administration under a unified arrangement. Major policies and measures are as follows:

1. Transform the recruitment system by introducing a contract system for newly recruited workers and staff and reorganizing the other workers and staff into new work teams under the economic responsibility system;
2. Institute a recruitment system in public organizations;
3. Open up an experimental job market in which labour force suppliers and demanders come into direct contact, removing the barriers between town and country, between different means of ownership, and between different trades and industries;
4. Delegate more decision-making power to localities and enterprises in labour and personnel matters and introduce a flexible recruitment system linking the total number of workers and staff in a given enterprise to the growth of its production output.

Price Reform

This refers to the reform of the price and the price control systems. Prior to 1978, China's price control was based on a unified system of state planned prices. Such a system had serious structural defects. The main problem was the price parities of commodities: prices of industrial products were too high relative to agricultural produce, finished products too high relative to primary products, and cash crops too high relative to cereals; for major farm products, marketing prices were lower than purchasing prices; finally, the price variation was much too small and did not reflect the quality gap for the same products. Owing to the irrational price structure, the prices of many commodities did not reflect their production costs, nor were they indicative of supply and demand in the market. Profits of commodity producers depended, to a large extent, on the discrepancy in external conditions and hardly reflected management performance. This led to an irrational allocation of resources, low macro-economic efficiency, and ineffective state regulation of the economy.

Therefore, the key to the establishment and perfection of the market network lies in a reform of the price and price control systems to ensure gradual introduction of a new price system in which price is generally in accord with value and reflects supply and demand, and under which there exist prices directly set by the state, prices determined under state guidance, and prices regulated by the market. Since 1978, efforts have been devoted to readjusting prices for farm and sideline products, manufactured goods, raw and semi-finished materials, and fuels. Yet, the problems have not been fundamentally solved.

The main ideas on China's price reform during the Seventh Five-Year-Plan period can be outlined as follows:

1. Except for a few major commodities whose prices should continue to be determined by the state, price control over ordinary commodities should

be systematically relaxed. The prices for farm and sideline products set by the state should be kept basically stable in every possible way.

2. Prices for some means of production will continue to be determined by the state while state control over the prices for others will be relaxed, with efforts being focused on removing the irrational price disparity between primary products and finished or semi-finished goods and the gap between planned and market prices for major means of production.
3. The fees for important public utilities and major items of service fees will remain under state control while control over other service fees will be gradually relaxed.
4. The scope and scale of price increases must be strictly controlled. Increase in production costs due to rising prices of major means of production should be offset as much as possible by management improvement and better economic results.
5. The government will formulate rules and regulations to enforce rigorous control and supervision over prices.

Intensifying and Improving Macro-Economic Control

The main theme and basic objective are to establish, step by step, a new system of macro-regulation through reform in state planning, the fiscal and monetary structure, and the labour and wage system, and through changes in the functions of the state and the methods it uses in economic management to ensure a rough balance between aggregate social demand and supply, and promote optimalization of industrial structure and scientific-technological progress.

(1) *Reform of the planning system.* The old planning system is based on the Soviet model which is characterized by excessive centralization. The main features of such a system are: (a) emphasis on direct state control and mandatory planning to the neglect of indirect control and guidance planning; (b) emphasis on production targets in kind to the neglect of output value; (c) emphasis on administrative mechanisms to the neglect of economic levers; and (d) emphasis on fiscal means to the neglect of monetary means for economic levers. The major defect of this system is that, owing to over-centralization and rigid state control, state plans are not as rational and flexible as they should be.

In reforming the planning system, priority should be given to gradual transformation of the old system which was based on direct state control into a new one under which the state mainly exercises indirect control over the economy through economic levers. The way to do so is to gradually reduce the scope of mandatory planning in favour of guidance planning in the light of actual conditions. Generally speaking, mandatory planning applies to state-owned key enterprises that have an important bearing on the overall national economy and to major means of production that are vital to the national economy and people's livelihood; guidance planning applies to small and medium-sized state enterprises and enterprises under collective ownership; while production of small articles and local specialities is regulated by the market.

It is imperative to improve and perfect decision-making in state planning through scientific substantiation. It is important for the central government to make rational decisions on economic and social development objectives, growth rate of the national economy, distribution of productive forces, and foreign economic relations so as to bring about an overall balance of financial, material, and human resources and foreign exchange reserves, and reinforce the formulation of medium- and long-term plans. Moreover, it is necessary to rationally divide administrative power over planning among departments, localities, and key cities. All ministries under the central government (with the exception of the Ministry of Railway, Ministry of Post and Telecommunications, and Civil Aviation Administration of China), provincial governments, and governments of the autonomous regions exercise no direct supervision over planned production targets of enterprises, which come under unified assignment by key cities. The old methods of planning based primarily on the aggregate output value and a small number of production targets in kind should be replaced by new ones with the per-capita national income and living standards as the base.

In the implementation of its plans, China should reverse the tendency of relying exclusively on administrative means by reinforcing the role of such economic levers as pricing and price control, credit, taxation, and exchange rate. After several years of reform, command planning has been replaced with guidance planning and market regulation in the agricultural sector. In the industrial sector, in the 1984–86 period, the proportion of the gross output value of industry for industrial products under command planning dropped from 40 per cent to 17 per cent; and their items also declined from 120 to around 60.

(2) *Reform of the fiscal and taxation systems.* Despite the fact that the revenues and expenditures of the central government were separated from those of local governments at different levels, the old fiscal system was over-centralized. This created the problem of revenues and expenditures being under rigid unified arrangement and expenditures divorced from revenues. The reform in recent years is primarily aimed to replace such uniformity with financial contracts. To handle the relationship between the central and local governments with regard to fiscal matters, China introduced in 1985 a system of financial contracting at all levels. This replaced the 1980 system of contracting revenues and expenditures at different levels and was used to delineate tax categories and verify revenue, expenditure, and contracts at different levels.

In handling the relationship between the state and enterprises, China has adopted the method of fiscal contracting. For example, state-owned industrial enterprises have begun to introduce, one after another, the systems of enterprise reserve funds, proportionate profit retainment, and tax payment in place of profit delivery. Public organizations are under a system of budgetary contracting; units and institutions that are engaged in capital construction are funded by bank loans instead of state budgetary appropriations. The restructuring of China's taxation system in the past few years has focused on rectifying the "left" practice of simplifying the taxation system during the "cultural revolution" and reintroducing and improving the multi-form taxation and tax delineating systems.

In addition to the above, further efforts will be made to reform financial institutions, improve economic legislation and judiciary, and restructure government departments in charge of economic management by reinforcing departments and institutions that exercise comprehensive economic regulation with a view to enhancing their capacity for macro-economic control. A new system of macro-economic control through planning, taxation and other fiscal measures, monetary controls, foreign exchange rates, pricing and price control, and economic legislation will become an increasingly important economic lever under the guidance of efficient government departments in charge of economic management.

III. Reform of China's Economic Structure and Economic Policies Concerning Relations with Foreign Countries

Opening to the outside world is a long-term fundamental policy China formulated in 1979. Since then, proceeding from the principles of self-reliance, equality, and mutual benefit, and following a new strategy of developing foreign economic relations, China has been vigorously promoting economic and trade ties with foreign countries and undertaking a series of reforms in economic policies and economic structure. These reforms cover the following areas: (a) foreign trade management system and policy; (b) policies concerning the use of foreign funds and import of foreign technology; (c) policies concerning undertaking contracted projects and labour services for foreign countries and providing economic aid to foreign countries; (d) monetary system and policies concerning relations with foreign countries; and (e) policies concerning special economic zones and other open regions.

1. Foreign Trade Management System and Policy

Foreign Trade Management System

Prior to 1979, China's foreign trade had been under unified control of the Ministry of Foreign Trade. A dozen or so import and export corporations were directly affiliated to the Ministry. Government functions were not separated from those of the trade corporations. Since 1979, reform has been focused on eliminating the domination of foreign trade by foreign trade departments and invigorating foreign trade enterprises. For the former objective, major measures are: (a) delegating more power in business deals to industries, localities, and some large and medium-sized enterprises (including foreign-Chinese joint-ventures, co-operative businesses, and enterprises with exclusive foreign capital); and (b) introducing a multi-channel and multi-form management system under which there are processing of materials for foreign businessmen, compensatory trade, barter trade, frontier trade, etc.

The principal measures for invigorating foreign trade enterprises include separating government functions from enterprise ones, undertaking import and

export on a commission basis, and combining trade with industries and technology import. Separation of functions means that the Ministry of Foreign Economic Relations and Trade (MOFERT), and its subordinate local bureaus and departments, no longer directly involved in import and export, are in charge of administration and policy planning. Separation of functions also means that foreign trade enterprises have become economic entities independent of foreign trade administrative departments, bearing full responsibility for their own profits or losses. By putting import and export on a commission basis and combining trade with industries and technology import, China replaced the old system where foreign trade departments were in charge of unified purchases and marketing, and responsible for all profits or losses. Under the new system, enterprises that produce export commodities or import foreign products are accountable for their own profits or losses, and foreign trade corporations maintain close lateral ties with production enterprises and research institutions, making joint efforts to promote foreign trade through co-operation and division of labour. Meanwhile, efforts are being made to reform the management system of export-oriented enterprises with the criteria for performance assessment shifting to export, production cost of export commodities, and the honouring of contracts.

Foreign Trade Planning, Tariff Structure, Licensing, and Price Fixing of Imports and Exports

Reforming the foreign trade planning system involves transforming exclusive mandatory planning into a combination of mandatory planning, guidance planning, and market regulation and gradually reducing the scope of mandatory planning while extending that of guidance planning and market regulation. This move is in line with the reform of national economic planning. With regard to exports, the state sets mandatory planned targets only for the total volume of exports, major items of export commodities, and a few items of export goods for balancing purposes. Purchase and distribution arrangements for export commodities are worked out by the localities and foreign trade enterprises under their own export plans. In the case of imports, state mandatory planning is applied only to commodities to be imported by departments and institutions at the central level and to the amount of foreign exchange earmarked for such imports by departments and localities. Prior to 1984, over 3,000 items of import commodities were placed under command planning. At present, the figure has dwindled to several dozens, and this declining tendency persists.

In 1984–85, a comprehensive revision was made in China's tariff regulations. The guideline for tariff reform is to implement the open policy, promote export, and increase indispensable imports so as to guarantee and speed up national economic growth. In fixing the tariff rates, the basic principles laid down are as follows:

1. Those commodities vital to the national economy and the people's daily life that cannot be produced in China or are in short supply on the home market are tariff-free or taxed at a reduced rate, while other tariff rates are higher.
2. Tariff rates for imported parts and components of machinery, instruments, and meters are lower than those for complete sets.

3. Commodities in need of protection on the domestic market are imported at higher tariffs.
4. With the exception of a few raw and semi-finished materials, export commodities are generally exempted from tariff.

Import and export tariffs are levied *ad valorem* and according to the origin of products. Custom duties are rated against the classified catalogue compiled by the Customs Co-operation Council. Import tariff rates are divided into immunity, minimal, and general rates. The minimal rates have 17 grades ranging from 3 to 150 per cent while the general rates with the same number of grades range from 8 to 180 per cent. The former applies to commodities exported by countries that grant "most-favoured nation treatment" to China whereas the latter applies to commodities of other countries. There is only a single rate for export tariffs with 6 grades ranging from 10 to 60 per cent. In order to protect certain industries in China that have a considerable gap with their counterparts in developed countries in production technique, the custom authorities began to levy, as of 1985, a regulatory tax on imports and, on commission, the unified industrial and commercial tax on imports.

Beginning from 1980, China reintroduced the system of import and export licences in place of the system practised in past years, under which imports and exports were based on commodity bills provided by the Ministry of Foreign Trade, to ensure foreign trade in an orderly way. Import and export licences are issued and authorized by MOFERT. The import licensing system serves as an important means to ensure that the limited foreign exchange reserves are used for imports that are badly needed in the country's economic development. MOFERT makes frequent adjustment of the restrictions placed upon the items of imports in the light of the foreign exchange reserves, domestic production, and changing markets, and publicizes them. At present, a total of 42 import items are under China's import licences. These imported items account for about one-third of the nation's total import volume.

The system of fixing prices on imports and exports is to be transformed from one of unified price fixing by the state to a multi-form pricing procedure. The state sets domestic prices for a few import items of vital importance to the national economy and people's livelihood such as rolled steel, chemical fertilizers, grain, etc. and bears responsibility for all profits and losses. Prices for the overwhelming majority of imports (approximately 70 per cent of total import volume) are fixed by foreign trade enterprises on commission. The domestic prices comprise cost, insurance, freight, import tariff, domestic tax, bank charge, and commission fee, and the import institutions bear responsibility for gains or losses.

There are two ways of fixing prices of export commodities. Export prices of commodities that are commissioned by foreign trade enterprises are determined according to domestic production costs and the world market price; in such a case, the enterprises receive a commission fee. Prices of commodities exported by foreign trade enterprises alone or jointly with production units encompass purchase price or production cost, shipping and other expenses, storage fee, bank charge, export tariff, and a moderate portion of profits. Due to China's imperfect

taxation system, exports still contain part product tax and added value tax. Moreover, prices for China's manufactured goods tend to be high because of the irrational price structure. Therefore, pending improvement of taxation and price systems, the state has adopted the practice of tax refunding and transitional economic assistance aimed at making it possible for Chinese exports to compete with foreign products under equal conditions in the international market. In principle this is different from export subsidies under Article XVI of GATT.

Foreign Trade Policy

Such reform aims mainly to adjust the goal of China's foreign trade and the means with which to achieve it as required by the modernization of the country.

As a developing country, China pursues, a basic goal in foreign trade — importing on a moderate scale, some advanced technologies, equipment, and essential means of production. To achieve this goal, on the one hand, it vigorously promotes export for more foreign exchange earnings, and on the other it economizes in the use of foreign exchange reserves, and adjusts and regulates the import product mix to enhance the economic results of foreign exchange used for imports.

Vigorous fostering of export industries and commodity export forms the core of China's foreign trade policy. The basic elements of this policy are:

- setting up a network of production bases for export commodities in coastal regions and other places where conditions permit, trying hard to increase the production of those low cost, fine quality export commodities that are readily marketable and ensured of timely delivery;
- fostering and supporting enterprises whose products are highly competitive on the international market giving favourable treatment to export commodity producers in terms of taxation, credit, depreciation, bonus, etc.;
- introducing a system of proportionate retainment of foreign exchange earnings from export;
- establishing funds for export promotion and for awards; and
- gradually changing the emphasis of the export product mix from primary products to finished products, and from roughly-processed manufactured goods to finely processed ones.

2. Use of Foreign Funds and Import of Technology

Use of Foreign Funds

China pursues an active and prudent policy concerning the use of foreign funds. It consistently adheres to three principles:

1. Control the scale and structure of foreign debts to make them commensurate with capacity to absorb and repay;
2. Use foreign funds for production and construction, and in particular, for promoting enterprises that produce export commodities to earn foreign exchange, turn out import substitutes, or have advanced technologies; and

3. Lay more emphasis upon economic results from the use of foreign funds and ensure the repayment of principal and interest. Apart from the above-mentioned enterprises, priority during the Plan period is given to the energy industry, transport and communications, raw materials, and especially to electric power generation, port construction, and oil production.

The major policies and measures are:

(1) *Open up more channels for using foreign funds in various forms, including preferential loans provided by foreign governments and international monetary institutions, commercial credits, direct investment; attracting foreign deposits and savings; and issuing shares and bonds abroad, etc.* Apart from borrowings by the state, a few cities and certain departments and institutions may, with the approval of the central government, also use foreign commercial credits as required.

(2) *Improve laws and statutes concerning foreign investment and the investment environment.* In order to improve the environment for foreign investment, China will reinforce the infrastructure and raise the work efficiency of government organizations and enterprises as well as their ability to handle foreign businesses and provide better service to foreign investors. Special mention should be made of the fact that the laws and statutes promulgated by the Chinese Government in recent years contain fairly concrete provisions about the orientation of, obligation to, and favourable treatment of foreign investment.

On the question of investment orientation, it is stipulated that enterprises with foreign investment must adopt advanced technology and management to facilitate technical innovation, ensure more foreign exchange earnings through export, and train competent management personnel. Such enterprises are obliged to respect China's sovereignty, abide by China's laws, protect the environment, and promote China's economic development. With regard to favourable treatment granted to foreign investment, it is provided that:

1. Foreign investment should account for no less than 25 per cent of the total investment of joint Chinese-foreign ventures with no upper limit.
2. Enterprises with foreign investment are permitted to sell a portion of their products on China's domestic market.
3. They receive equal treatment with Chinese state enterprises in terms of prices and bank loans.
4. They have appropriate preferential treatment in material supply and in the import of equipment and materials.
5. Their independent management is ensured, in addition to preferential treatment in taxation.

Taxation decrees concerning foreign investment stipulate that on the basis of general low rates of taxes for such investment, tax reduction or exemption applies to the following:

- long-term foreign credits;
- investment in agricultural, animal husbandry, and forest undertakings;
- investment in scientific and technological projects, the energy industry, transport and communications, and other important areas;
- investment in undertakings in frontier and remote regions; and
- income tax on profits for reinvestment in China.

Necessary machines, equipment, and raw materials these enterprises need to import from abroad and their export commodities are exempt from custom duties and the industrial and commercial uniform tax; fixed assets from investment by foreign enterprises are allowed a faster rate of depreciation (generally 5 to 10 years, but 20 years for housing).

According to a decree on inviting investment from foreign businesses that was issued in October 1986, special preferential treatment is granted to export enterprises and those enterprises with advanced technologies that have foreign investment: a reduced rate of the service and land fees, and exemption of income tax on the profits that are remitted abroad. This would make it possible for foreign entrepreneurs to run enterprises in China in accordance with international norms, and consequently attract more foreign investment.

(3) *Give better guidance on the use of foreign funds and better socio-economic results.* Unified borrowing from abroad by the state is placed under mandatory planning while guidance planning applies to other borrowings. However, all projects that use foreign funds shall be subject to state plans for utilization of foreign funds and foreign exchange earnings and expenses, and approved by governments at all levels through set procedures. Efforts are being made to increase feasibility studies on such projects and strike a comprehensive balance in production, market access, and repayment capacity.

Technology Import

Planned introduction of foreign technology and intellectual resources from abroad is an important means to China's advancement in science and technology. Technology import is focused on advanced, applicable technologies that can expedite technical innovation of existing enterprises, enhance the level of their management, and increase the production of export commodities and import substitutes. In technology import, the overall scale, total foreign exchange expenditure, and major items are under state mandatory planning. Technology import departments must draw up plans for individual trades and industries under a licence system. Major forms of technology import comprise licensing trade, provision of professional techniques, offering of engineering and technical services, etc. Such importation should be combined with integration, development, and innovation. Duplication of imports should be avoided. Introduction of foreign intellectual resources refers to recruiting foreign professional personnel specializing in product development, technical designing, enterprise management, and project construction and seeking their co-operation and advice.

3. Contracted Projects, Labour Services, and Economic Assistance to Foreign Countries

A new undertaking by China that began in the early 1980s consists of contracted projects and labour services to foreign countries. This undertaking, which has a great potential for economic and technical co-operation, follows these basic principles: honouring contracts, ensuring quality, making small profits, and acting in good faith. In other words, China respects the sovereignty of the countries concerned, does not interfere in their internal affairs, attaches no conditions, and undertakes projects with moderate investments, short construction cycles, and quick economic returns to raise economic efficiency for both sides. Multi-form lateral co-operation must suit local conditions, and China takes the requirements and difficulties of its foreign partners into full account. Charges and fees are reasonable, fluctuating in accordance with the market.

In providing economic assistance to foreign countries, China proceeds from the principles of equality and mutual benefits, achieving practical results, taking diverse forms, and promoting common development. On the one hand, China provides economic assistance to other Third World countries within its capacity, mainly undertaking small and medium-sized projects that need moderate investment and easy management skills but play an effective role in meeting the needs of recipient countries for their economic development and people's livelihood. China now implements a contracted responsibility system and puts project planning and fund using under unified direction. At the same time, China works in close co-operation with specialized organizations of the United Nations and other international economic institutions and accepts multilateral and bilateral assistance. Priority is given to developing technology and tapping intellectual resources. The use of project funds is placed under unified planning.

4. Monetary and Foreign Exchange Policies

In foreign exchange matters, China follows a policy of centralized administration and balanced international payments. The State Administration of Foreign Exchange Control under the People's Bank of China is the principal organ exercising control over foreign exchange. It is in charge of implementing the statutes concerning foreign exchange control, formulating plans for foreign exchange earnings and payments, regulating the exchange rates between the renminbi and major foreign currencies, holding foreign exchange reserves, administrating foreign debts, and handling foreign currency transactions. The Bank of China is a specialized bank that is engaged in the foreign exchange business, although other banks can also do the same within specified limits.

China consistently exercises centralized control over its foreign exchange. The reform undertaken in recent years has been (1) to introduce a system under which localities, departments, and enterprises that earn foreign exchange may, when selling them to the state, retain some portion for their own disposal; and (2) to start the business of foreign exchange adjustment through administrative institu-

tions of foreign exchange control or the Bank of China. Further efforts should be made to improve the state unified control of foreign exchange and foreign debts, and bring under state planning foreign exchange earnings and expenses of departments and institutions at all levels, their use of foreign funds, and their investment abroad. At the same time, foreign exchange markets should be opened up gradually.

The fundamental principle in China's monetary regulation concerning financial relations with foreign countries is to strike a basic balance in foreign exchange earnings and expenses, and hold necessary reserves. To this end, vigorous efforts should be made to earn more foreign exchange not only through increased export of goods, but also through service exports such as air transport, shipping, banking, insurance, post and telecommunications, tourism, contracted projects, and labour service co-operation, etc. On the other hand, China should try in every possible way to economize in the use of foreign exchange. The state controls the planned total of exchange reserves earmarked for departments and localities. Departments and institutions that have introduced a contracting system with regard to production and investment also put their foreign exchange used for technology import on a contracting basis. Regulations and procedures for approval of foreign exchange expenses on imports should be strictly implemented. To conserve foreign exchange, China should also avoid importing at random.

As to the policy concerning exchange rates, the renminbi is a non-convertible currency and its exchange rates are determined by the State Administration of Foreign Exchange Control. As of 1981, the system of internal settlement for trade-related renminbi accounts has been replaced by a new system based on a unitary exchange rate and regulated floating rates. The regulation of the renminbi's exchange rates is based on the purchasing power of the Chinese currency in relation to that of foreign currencies, China's current and prospective balance of payments and foreign exchange reserves, and the changing exchange rates of foreign currencies on international financial markets.

One major element of China's open policy concerns the development of the special economic zones and open coastal regions which are forward bases for China's opening to the outside world. Compared with the hinterland, these zones and regions have two features: (1) they enjoy more decision-making power and receive more preferential treatment in the use of foreign funds, technology import, and foreign trade; and (2) their development strategy is focused on the expansion of an export-oriented economy. During the Seventh Five-Year-Plan period, the goal for these zones and regions is to take advantage of their favourable conditions to quicken the pace of importing foreign funds and advanced technologies, vigorously promote technology- and knowledge-intensive industries, and develop a new-type economy that combines trade, industry, and agriculture so that they will become forward bases for China's economic and trade relations with the rest of the world.

Early in 1988, in response to changes in the world economy, particularly to economic adjustments in the Asia-Pacific region, General Secretary Zhao Ziyang proposed an economic development strategy for China's coastal areas. He pointed out that

> Economic development in China's costal areas is making the best use of a good opportunity. Due to rises in labour costs, the developed world has been readjusting its industrial set-up and moving labour-intensive industries to places where labour costs are low. In this process, China's coastal areas are attractive since they have low-paid but fairly skilled labour, good transport facilities and infrastructure, and very importantly, a good scientific and technological development potential. So long as they do well, China's coastal areas should be able to secure sizeable foreign investment.

Zhao further proposed that

> It is necessary for the coastal areas, with their population of one or two hundred million, to take their place on the international market in a planned way and step by step get further involved in international exchanges and competition, and energetically develop an export-oriented economy.

Zhao's remarks symbolized a major adjustment in China's development and trade strategies — a shift from inward to inward-cum-outward ones. However, whether this development strategy for the coastal areas can be implemented without hindrance, depends, first of all, on whether China's current economic reforms can be deepened further. With a view to ensuring the implementation of the strategy put forth by Zhao, drastic structural reform is planned for China's foreign trade structure, with the focus on the introduction of an overall managerial contract responsibility system, a system which has brought about beneficial results in the structural reforms in China's agriculture, industry, and commerce. Under this responsibility system, localities will contract with the state for the amount of foreign exchange earnings from export and hard currency they are obliged to turn over to the state; they are entitled to retain part of the above-contracted-quota hard currency. The contracted foreign trade assignments of the localities will then be subcontracted to the basic units under their respective control. Following the introduction of the system, the power to handle most import and export commodities will be transferred to local foreign trade companies. At present, over ten thousand export-oriented enterprises can export their products directly to the international market. It can thus be anticipated that, along with the full-scale implementation of the managerial contract responsibility system, good prospects for foreign trade are projected for the coastal areas and the country at large.

Meanwhile, for further attraction of foreign investment, more preferential treatment, especially the improved "soft" environment, will be offered. General Secretary Zhao Ziyang has stated that it is necessary to let foreign businessmen manage foreign-funded enterprises. For a while, at least, the management of Sino-foreign joint-ventures and co-operative enterprises should be left to foreigners. They should be allowed to run the enterprises according to international norms: advertising for employees publicly and freely, and dismissing workers according to contract. As Zhao correctly points out, the investment environment can be judged by whether or not a foreign business is able to make a profit. If a foreign manager runs an enterprise well and makes more money by exporting more products, all will benefit.

In sum, the development strategy for the coastal areas places stricter demands on China's economic reforms; conversely, the deepening economic reforms will ensure in turn the satisfactory implementation of this development strategy.

IV. Impact on China-ASEAN Economic Relations

Since the final goal of China's economic reforms is the establishment of a highly developed commodity economy, as economic reforms deepen the behavioural features of the various entities and agents in the Chinese economy will converge more and more with those of a market economy. As a result, the institutional barriers in China-ASEAN economic interaction will correspondingly diminish. This point should be recognized at the outset when we discuss the impact of China's economic reforms on its economic relations with ASEAN.

As noted earlier, China's economic reforms involve three main aspects: enterprise invigoration, market nurturing, and macro-economic control improvement, with focus on enterprise invigoration. In fact, the satisfactory progress of China's economic reforms serves as a strong impetus to the steady and sustained growth of the national economy, which registered a 10.3 per cent average annual growth rate of social gross output value in the 1979-86 period. This steady sustained growth has created favourable conditions for the expansion of China's foreign economic relations, including those with the ASEAN countries. Between 1978 and 1986, the total volume of China's imports and exports grew at an average annual rate of 14.3 per cent; with that between China and the ASEAN countries growing at a similar rate.

In the process of economic reform, enterprises in China have been transformed, to a considerable extent, from being administrative appendages into socialist commodity producers and managers with relative autonomy, able to manage their own affairs and be responsible for their own profits and losses. They have begun to develop behavioural features similar to those in the market economies, and factors such as price and profit play an ever bigger role in their decision-making. No longer confined to the domestic market, they are turning their eyes to the outside world. If more profits could be earned in the international market, they are now only too ready to expand their business. As a matter of fact, since the economic reforms, more and more enterprises have put on their agenda the task of expanding international market access and have thus far made some achievements. Therefore, it can be said that autonomous management coupled with assumption of sole responsibility for profits and losses have raised the degree of outward orientation of China's enterprises. This will certainly spur greater economic exchanges, trade in particular, between China and the ASEAN countries.

Up till now, the major progress in the structural reforms in China's foreign trade has been the removal of state monopoly. Over 8,000 enterprises are now allowed direct interaction with foreign markets. Meanwhile, local foreign trade companies have also gradually turned from being former appendages to national

foreign corporations and into financially independent business entities capable of autonomous management. After the removal of the main obstacle artificially separating the domestic market from the foreign market, a more direct link has thus been established between Chinese enterprises and the international market.

Under the old planning system, export enterprises produced in accordance with the command plan assigned by MOFERT. This made it impossible for them to respond to exchanges in demand and supply in the international market. By the time certain products with a good marketing opportunity were finally sent to the international market, they would often have missed the opportunity due to changed demand and supply, and therefore heavy losses from drastic price drops were incurred. After reforming the old planning structure, the state will set mandatory planned targets only for the total export volume, volume of major items of export commodities, and supply arrangement for a few export items under the state overall balance. Local export enterprises and foreign trade companies will then be left free to handle their export business so that they can adjust their production and export speedily in response to changes in the international market.

In sum, structural reforms in foreign trade and planning will make it possible for China's export-oriented production enterprises to establish direct links with overseas markets, thus facilitating their timely adjustments in production, import, and export in response to changing supply and demand in domestic and foreign markets. All these are expected to change the state of affairs which caused frequent complaints from ASEAN businessmen about narrow business channels and low efficiency in China trade.

Another foreign trade constraint is China's long-established irrational price structure. The prices of many commodities reflect neither their production cost nor supply and demand. Such an irrational price structure not only entailed irrational allocation of domestic resources but also blocked the expansion of foreign trade. As a result, the state was forced to adopt a series of remedial measures to help export enterprises earn normal profits. Although this transitional economic assistance scheme aims at making it possible for Chinese products to compete with foreign products on equal terms in the international market, it reduces the degree of transparency of China's foreign trade policy and is therefore detrimental to the normal development of China's trade with ASEAN and other countries. However, along with the deepening of economic reforms, such a cumbersome practice of export pricing will gradually come to an end. Furthermore, the current price reform is expected to strengthen the link between domestic and international prices. This will certainly bring about a greater convergence between China's trade practices and international norms and various GATT regulations. This convergence will be a positive factor propelling China-ASEAN trade.

Improvement of the macro-economic control mechanism also plays a significant role in facilitating China's foreign economic relations in general and foreign trade in particular. For example, in 1985, due to inefficient macro-control over consumption and investment funds, the sharp rise in domestic demand led to rising production costs and the resultant heavy losses for export enterprises.

The favourable conditions for domestic sales induced many of these enterprises to turn their attention to meeting domestic demand, thus causing a drastic reduction in China's exports. Only after strengthened state macro-control on overheated domestic consumption and investment, coupled with a series of export-stimulating measures, was it possible for China's export to regain its normal growth in 1986. It is believed that along with the improvement of China's macro-control mechanism, macro-control will gradually replace administrative interference. Under such circumstances, China's import and export growth will be more stable and more predictable. Undoubtedly, this will also contribute to the expansion of trade with ASEAN and other countries.

On the balance, in the long term, China's current economic reforms will undoubtedly help the country speed up its opening to the outside world both in breadth and depth. However, in the short term, these economic reforms are not without problems. In the process of reform, China's foreign economic relations may suffer some possible shocks and disturbances. For instance, in 1985, due to the failure of the state to exercise proper macro-control in the course of decentralizing decision-making power in foreign trade, many local foreign trade companies and export enterprises vied with one another in promoting exports in pursuit of earning more foreign exchange, disregarding the overall interest of the state and the absorptive capacity of the international market. Such blind export competition undermined China's traditional overseas business channels, infringed on the interests of its foreign trade agents, led to the deterioration of the country's terms of trade, and brought about drastic reduction in its export revenues inspite of rising export volume. However, such problems are temporary in nature and will eventually disappear along with the deepening of the economic reforms and improvement of foreign trade structure.

Finally, the progress of China's economic reforms constitutes an indispensable condition for the successful attraction of foreign investment to China. Beginning in 1979, China has made tremendous efforts to improve its investment environment. For example, in the special economic zones and coastal cities, China has built or reconstructed such infrastructure as ports, docks, railways, and roads; ensured supply of water, electricity, and gas; and erected factory buildings and other supplementary buildings. It has also provided foreign investors with extremely favourable treatment in terms of share ownership, profit remittance, and so on in its various foreign investment-related laws and regulations. Admittedly, however, there still remain many problems, particularly the need to improve the "soft environment" for foreign investment. Foreign-funded enterprises, Sino-foreign joint-ventures, and co-operative enterprises still encounter many difficulties not normally encountered in advanced market economies. Bureaucratic forms notably hinder foreign investment. With this situation in mind, General Secretary Zhao Ziyang has proposed that foreign businessmen be allowed to run the above-mentioned three categories of enterprises.

It is believed that structural obstacles to the attraction of foreign investment will gradually vanish in the course of the deepening of economic restructuring. As a result, China's attraction to foreign investors will increase. This will possibly

enhance China's competitiveness with ASEAN countries in the realm of foreign capital enticement. However, it should not be forgotten that improvement in China's investment environment will also facilitate the operations of existing ASEAN-funded enterprises and help absorb additional investments from ASEAN countries. What is more, ASEAN investment in China will certainly promote mutual trade and technological exchanges.

In sum, China's economic restructuring has promoted the development of economic relations with ASEAN and other countries and regions. It has also provided China with the ability to "grasp the opportunity and meet the challenge" in the world economy. Similarly, it has created an opportunity and posed a challenge for the ASEAN countries. It is sincerely believed that only if China and the ASEAN countries broaden the scope of dialogue, deepen mutual understanding, and strengthen mutual co-ordination can both sides can further expand economic co-operation for common prosperity.

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China's Changing Industrial Structure: Its Impact on Economic Relations with ASEAN Countries

Luo Shaohong, Cheng Bifan, and Gao Tiesen

I. Introduction

A well-defined policy for industrial structuring has yet to emerge in the People's Republic of China (PRC). For years there was emphasis on proportional arrangement in planning, first between agriculture and industry (including sometimes transport and communications and the building industry), then between light and heavy industries, thus setting up a proportional relationship among agriculture, and the light and heavy industries. In those years, service trades, or the so-called tertiary industry, were simply excluded from planning, and the international practice of building a separate statistical system for service trades was largely unknown. Moreover, China's policy for industrial structuring was detached from the international environment due to its seclusion from the outside world.

It was only in recent years, along with the deepening of economic reforms and the introduction of the open policy, that China began to show interest in exploring issues related to industrial structure. In the course of extensive discussion, in spite of competing views and scenarios, a consensus eventually emerged that the comparative rationality of China's current industrial structure should be rectified and that the traditional theory of socialist product economy should be discarded in favour of one advocating socialist commodity economy as the guiding principle in formulating a new industrial policy. Simultaneously, consensus has also been reached as regards the content of industrial policy, its linkage with China's long-term development strategy and current economic restructuring, and the direction of industrial structural adjustment and its relation with the international environment.

In fact, the basic concept of China's industrial structure contained in *The Seventh Five-Year Plan for National Economic and Social Development (1986–90)* adopted at the Fourth Session of the Sixth National People's Congress represents the result of explorations of recent years.[1] This basic concept was also embodied in General Secretary Zhao Ziyang's report to the Thirteenth National Congress of the

Communist Party of China on 25 October 1987, in the section concerning the rationalization of industrial structure and enterprise set-up.[2] These documents cover many basic points of the guidelines for industrial structural adjustment. Discussion is still going on. It is widely felt that an early formulation of a long-term industrial policy is of vital significance, not only for guaranteeing realization of the strategic goals for economic development set for the end of this century, but also for harmonizing emerging contradictions in the course of economic reform and securing a steady development of the national economy in the process of economic restructuring.

This paper will thus focus on the above-mentioned consensus and the general trends in China's industrial structural readjustment. For background information, the paper gives an overview of the past development and current situation of China's industrial structure. After touching on the trends of structural readjustment, an exploration of possible changes in China's foreign trade is presented. Finally, the impact of China's industrial restructuring on its economic relations with ASEAN countries is discussed.

II. China's Past and Present Industrial Structure

1. Brief Retrospect

The PRC took over an economic shamble from the Kuomintang regime in 1949. At that time, the gross output value of modern industry accounted for only 17 per cent of the gross output value of agriculture and industry, with the average annual output of steel at only 158 thousand tons, having fallen from 900 thousand tons in the peak years; coal was around 32 million tons as compared to 62 million tons in the peak years; electricity generating capacity was 4.3 billion kWh; and annual grain yield, 113 million tons. After three years of economic recovery, the First Five-Year Plan for Economic Construction was begun in 1952, with the basic task of laying the initial foundation for socialist industrialization. Top priority was then given to the rapid development of heavy industry to meet the objective need at that time, partly because of the weak basis of China's heavy industry, and partly because of the economic blockade, military encirclement, and war threat imposed on China in its founding years by the Western powers. It was then of absolute necessity to lay the foundation for heavy industry and strengthen national defence in the shortest possible time. Even so, the government did not ignore the corresponding development of agriculture and light industry. As a result, there was no obvious imbalance between industry and agriculture, or between heavy and light industries. This led to comparatively satisfactory economic results and general improvement of the people's living standards. The share of agriculture in the gross output value of agriculture and industry decreased from 56.9 to 43.3 per cent in the 1952-57 period, while the share of light industry to total industry dropped from 64.5 to 55 per cent, and that of heavy industry rose from 35.5 to 45 per cent. In the same period, national income was up 53 per cent.

Unfortunately, in the two decades since the end of the First Five-Year Plan up to the year 1979, China did not adjust its policy for economic development to respond to changes in the structure of the national economy, but continued the development strategy characterized by priority on heavy industry, followed by light industry and then agriculture. This rigid practice resulted in a serious imbalance in economic structure which began to surface as early as the later years of the First Five-Year Plan. To a certain extent the excessive development of heavy industry hampered the development of light industry and agriculture. This in turn resulted in shortages in market supply and the government was forced to introduce the policy of state monopoly for purchase and marketing of such essential products as grain and cotton.

The unbalanced relationships among light industry, heavy industry, and agriculture in terms of development speed and investment allocation worsened in those two decades. The mistakes in economic decision-making manifested themselves most strikingly in the years 1958, 1970, and 1978.

The so-called "Great Leap Forward" launched in 1958 resulted in distortions in the structural balance among heavy industry, light industry, and agriculture. The shares of light industry and agriculture in the gross output value of industry and agriculture dropped respectively from 31.2 and 43.3 per cent in 1957 to 26.1 and 21.8 per cent in 1960, while that of heavy industry rose sharply from 25.5 to 52.1 per cent. Such a serious imbalance led to a decline in the national income and living conditions of the people.

In 1970, capital construction investment rose to RMB32.65 billion, an increase of RMB11 billion or 55.6 per cent over the previous year, while the share of heavy industry in capital construction investment reached 57.5 per cent. Consequently, the respective shares of heavy industry, light industry, and agriculture in the gross output value of industry and agriculture changed from 30.4, 32.3, and 37.3 per cent in 1965 to 35.7, 30.6, and 33.7 per cent in 1970. The excessive development of industry outstripped the original plan in terms of employment, the total sum of wages, and grain consumption, thus once again triggering off a serious imbalance in the national economy.

The salient feature of the imbalance in 1978 was the excessive volume of investment in major construction projects. These comprised mainly metallurgical and petrochemical projects whose import needs absorbed a huge amount of foreign exchange. In that year alone, the total sum earmarked for capital construction climbed up to RMB50.1 billion. The share for heavy industry was 53.3 per cent. On the other hand, the share for light industry was 5.5 per cent, and for agriculture, 11.3 per cent. The respective shares of heavy industry, light industry, and agriculture in the gross output value of industry and agriculture were 41.1, 31.1, and 27.8 per cent respectively. Compared with the 1970 figures, the proportion for heavy industry registered a sharp jump of 5.4 points, that for light industry showed a slight increase of 0.5 points, while that for agriculture declined by 5.4 points.[3] The distorted structure of the national economy precipitated a serious imbalance in financial revenue, bank credit, material supply, and foreign trade. It also caused a deficit in the current account of the balance of payments.

Beginning from 1979, the Chinese Government decided to concentrate its efforts on rectifying the serious imbalance in the national economy with a three-year readjustment, restructuring, consolidation, and improvement. By the year 1981, the State Council came to realize that the scope of economic readjustment should be far wider than the extent originally contemplated. For the rationalization of economic structure, it was not only necessary to readjust the proportion between industry and agriculture, between light and heavy industries, and between accumulation and consumption, but also to make readjustments in product, technological, enterprise, and organizational structures. Therefore, the government decided to spend an additional five years to press ahead with the principle of readjustment.

2. Readjustment in the Sixth Five-Year-Plan Period

Starting from the Sixth Five-Year Plan, a fundamental shift occurred in China's economic development strategy. In his report on the government's work delivered at the Fourth Session of the Fifth National People's Congress in November 1981, Premier Zhao Ziyang pointed out unequivocally that China should

> discard the old method adopted under the long-time guidance of 'left' ideology and take on a new path suited to its actual conditions, with a feasible speed, better economic results and more real benefits for the people.

In other words, China intended to change its development strategy. The so-called traditional development strategy adopts a quantitative growth development model, with increase of output value as its objective, rise in accumulation and investment as the means, and extensive development as its method, in disregard of quality and economic results, well-balanced co-ordination, structural reform, and technological progress and renovation. The new development strategy focuses on the incremental satisfaction of the growing material and cultural needs of the people by (a) switching from the past practice of a single-minded pursuit of rate of growth to regarding better economic results as the central task, and (b) by shifting from extensive to intensive development in expanding production. In addition, the new development strategy also involves the shift from actual national seclusion to opening to the outside world.

With improving economic results as the objective, the Sixth Five-Year Plan projected an average annual growth rate of 4 per cent (with 5 per cent as the strived-for goal) for industrial and agricultural production. However, this target was greatly outstripped by actual performance, with overall annual growth rate averaging 10.8 per cent, and annual growth rates of 11.6 per cent in agriculture and 10.4 per cent in industry (11.8 per cent in light industry and 9.2 per cent in heavy industry). Such a high average annual growth rate represented an overheated economy, with its attendant problems and latent dangers. Nevertheless, in the light of economic achievements, the Sixth Five-Year-Plan period proved to be one of the best periods since the founding of the PRC with the accomplishment of its original aim of gradual improvement in economic results.

During the Sixth Five-Year-Plan period, the average increase of national income per RMB100 accumulation was higher than that in any other previous five-year plans (Table 2.1).

TABLE 2.1
Increase in National Income per RMB100 Accumulation

Year	Total Accumulation (RMB hundred million)	National Income Increase per RMB100 Accumulation (RMB)
1st 5-Year Plan	200	32
2nd 5-Year Plan	346	1
1963–65	270	57
3rd 5-Year Plan	409	26
4th 5-Year Plan	729	16
5th 5-Year Plan	999	24
6th 5-Year Plan	1,641	40

NOTE: Calculated at current prices.

SOURCE: China Statistics Press, *China Statistical Yearbook, 1987* (Beijing; October 1987), p. 66.

Since the implementation of the readjustment policy, conditions in China's industrial structure have somewhat improved.

First, the composition of the three categories of industries has undergone positive changes. China's sectoral composition is characteristic of a developing country, with a preponderant share for the primary industry, a rising share for the secondary industry, and initial progress (on an extremely underdeveloped basis) for the tertiary industry. The share of the tertiary industry in the gross domestic product rose from 20.9 per cent in 1976 to 25 per cent in 1986.[4] Such a general trend will continue in the future. In other words, the task set for industrial restructuring lies first in reducing the proportion of the primary and secondary industries in the gross output value and raising considerably the proportion for the tertiary industry, and then readjusting the international substructure of each industry and correcting for the undue emphasis on heavy industry and relative backwardness of consumer goods production, so as to make the industrial structure capable of meeting the needs of technological development and the rising living standards of the people.

Second, in the light of the internal structural changes of industry, the proportion for light industry in the gross output value of industry, rose from 43.1 per cent in 1978 to 46.9 per cent in 1986, while that for heavy industry in the corresponding years dropped from 56.9 to 53.1 per cent (Table 2.2). This shows that light industry grew faster than heavy industry in this period.

TABLE 2.2
Changing Composition of Light and Heavy Industries, 1978–86

	Total Industry Output Value	Light Industry Output Value (RMB hundred million)	Heavy Industry Output Value	Percentage of Total	
				Output Value for Light Industry	Output Value for Heavy Industry
1978	4,067	1,753	2,314	43.1	56.9
1979	4,483	1,958	2,525	43.7	56.3
1980	4,897	2,903	2,588	47.2	52.8
1981	5,120	2,673	2,483	51.5	48.5
1982	5,506	2,766	2,740	50.2	49.8
1983	6,088	2,954	3,134	48.5	51.5
1984	7,042	3,335	3,704	47.4	52.6
1985	8,756	4,088	4,668	46.7	53.3
1986	9,834	4,609	5,225	46.9	53.1

SOURCE: China State Statistics Bureau, *Abstracts of China's Statistics* (Beijing: China Statistics Press, May 1987), p. 8.

Third, in the 1979-86 period, agriculture evidently grew rapidly, indicating the impressive achievements of the reform. In this period, the share of agriculture in the gross output value of industry and agriculture rose from 27.8 per cent in 1978 to 35 per cent in 1986, while that of industry dropped from 72.2 to 35 per cent (Table 2.3).

TABLE 2.3
Composition of Gross Output Value of Industry and Agriculture

	Percentage Share of the Gross Output Value of Agriculture and Industry (At current prices)	
	Agriculture	Industry
1978	27.8	72.2
1979	29.7	70.3
1980	30.8	69.2
1981	32.5	67.5
1982	33.6	66.4
1983	33.9	66.1
1984	35.0	65.0
1985	34.3	65.7
1986	35.0	65.0

SOURCE: China State Statistics Bureau, *Abstracts of China's Statistics* (Beijing: China Statistics Press, May 1987), p. 9.

Fourth, some progress has been made in the technical revamping of existing enterprises. From 1977 to 1986, investment earmarked for technical renovation of state-owned enterprises increased 2.8 times and its share in the total sum of investment rose from 22.6 to 33.8 per cent. For example, in iron and steel in the Sixth Five-Year-Plan period, of the total additional capacity for iron-smelting, 83.8 per cent came from technical revamping and potentialities tapping, while the corresponding figure for steel was 97.3 per cent. In technical renovation, China is well aware of the importance of utilizing foreign capital and importing technology. It is estimated that China has imported 14,000 items of technology and key equipment of various kinds worth more than US$10 billion since 1979. The main economic benefits from this importation are:

1. Narrowing of technological gap between China and the advanced countries. Many electronics enterprises such as those producing colour TV sets, tape recorders, and electronics components and spare parts have made the transition from manual to mechanized, and semi-automatic and automatic operation, and adopted advanced technologies for fine processing and automatic testing. As a result, the percentage of electronics products reaching the international standard of the late seventies and early eighties

rose from 15 per cent in 1982 to 30 per cent and more currently, while 10 per cent of the machine-building industry products has also reached the international standard of the early eighties;

2. Strengthening independent research and development capabilities; and
3. Promoting exports.

Thus in Shanghai, 85 of 781 items of imported technology have turned out products for export.

Fifth, significant changes have occurred in the rural industrial structure. Chinese farmers are no longer engaged merely in agriculture in the narrow sense of cultivation and animal husbandry, but are also engaged in rural industry and sideline occupations in a big way, thereby promoting prosperity in the rural economy. Township and village enterprises financed by farmers collectively or individually and accelerated township construction have brought about the rapid shift of the farming population to non-farming occupations. Such a population shift, in the form of "leaving farming without leaving the land", is a special feature of China's economic restructuring. There were more than 15 million township and village enterprises throughout the country by 1986, absorbing one-fifth of the rural labour force and making up 48.9 per cent of gross rural income and 23 per cent of gross national industrial output. They have clearly taken up an important position in the national economy.

Sixth, improvement has been made in the regional distribution of the national economy. Since the founding of the PRC, the government has given priority to developing industry in the western interior of the country partly for rectifying the imbalance in regional economic development and partly for national security. Nearly RMB200 billion of capital was allocated to this area, with the fixed assets thus formed having a total original value of some RMB140 billion. However, due to lack of overall arrangement and comprehensive balance, and as a result of an irrational investment structure, these newly-built enterprises showed poor economic results, with many incurring losses. Meanwhile, investment in the construction of industrial bases in the eastern part of the country was largely ignored as a consequence of preoccupation with industrial development in the western interior of the country. This deviation was rectified in the Sixth Five-Year-Plan period with the guideline for development changed to emphasize the potentialities of the multifaceted economic-technological advantages of the eastern part on the one hand, and systematically developing the material resources in the central and western parts on the other, thus taking a step toward rationalization of national economic production.

Seventh, the open policy put an end to China's national seclusion. From 1979 to 1986, China's foreign trade increased by an average annual rate of 24 per cent, while the share for imports and exports in the gross social output value rose to 13.7 per cent, or 2.6 times the 1978 figure. At the same time, China established special economic zones and coastal open cities and areas in succession, in order to create a better environment for foreign direct investment. By 1987, the total sum of foreign direct investment with signed contracts reached US$19.5 billion, including US$6.5 billion actually utilized, involving 7,775 foreign enterprises in

various forms. Meanwhile, China for its part has also made overseas investments. By June 1987 there were more than 300 state-authorized non-trading enterprises abroad, with a total investment of over US$500 million and 50 per cent plus Chinese participation. Among them, more than half are now in operation.

3. Existing Problems

The above-mentioned facts notwithstanding, the improvement in the industrial structure under the Sixth Five-Year-Plan period is still only at an initial stage; a fundamental change has yet to occur in the irrational industrial structure, especially structural deepening.

First, judging from the proportion of the three economic sectors, despite their considerable rapid development under the Sixth Five-Year-Plan period, the share of the tertiary industry in the 1985 gross domestic product was only 25 per cent, still a far cry from the typical share for a low-income country (around 35 per cent). This underdevelopment of services not only seriously affects market nurturing but also hampers the creation of jobs.

Second, basic industries still lag far behind. Both the development of the manufacturing industry and the flow of rural population to the cities and towns call for synchronized growth of the basic industries with total social product, or better still, its forward growth. However, the figures of forward coefficient for basic industries are all negative in the Sixth Five-Year-Plan period (Table 2.4).

TABLE 2.4
Forward Coefficient of Basic Industries, 1981–85

Industry	Forward Coefficient
Coal	−0.36
Oil	−0.7
Electricity Output	−0.42
Steel	−0.43
Water Supply	−0.02
Highway Laid	−0.04
Railway Laid	−0.05

NOTE: Forward coefficient indicates the ratio minus one between the growth rate of the ouptut value of basic industries and the growth rate of the total social product. A positive ratio means the former grows faster than the latter, while a negative ratio represents the reverse.

SOURCE: Center for Development Studies, "A Preliminary Proposal for Implementing the Industrial Policy", *The World Economic Herald* (Shanghai), 18 May 1987.

It is estimated that around 25 to 30 per cent of production capacity in the country lies idle because of the shortage of electricity. About 10 to 20 million tons

of steel had to be imported in 1986. The average daily loading rate of the freight cars can only meet 70 per cent of the demand, while over 100 million passengers travel by passenger trains. The national telephone popularization rate is only 0.6 per cent or so.

Third, import-substitution-type industries producing consumer durables grow rapidly, while the domestic production of their parts and components lag behind. As a result, the production of such consumer durables still rely on imported inputs. This means import substitution is yet to be completed. In the additional gross output value of industry in 1985, 30.8 per cent came from sectors producing new consumer goods including medicine, chemical and plastic goods for daily use, machines for cultural, educational, and artistic purposes, and metals for daily use. But the production capacity for most of them has been built up by importing assembly or production lines. The national content is still very low in terms of major parts, components, and raw materials. The output of black and white TV sets was 16.68 million, while the domestic output of kinescopes in the same year was only 8.23 million or less than half the amount needed to form complete sets. Similarly, the output of colour TV sets was 4.35 million in 1985, while the domestic output of kinescopes for colour TV sets was less than a million. Compared with 1981, the amount of imported parts, accessories, and fittings increased 6.1 times in 1985 with its share in the amount of imported machines and equipment rising from 8.2 to 20.9 per cent. The output of colour TV sets in April-September 1986 dropped by 33 per cent in comparison with the output of the corresponding period in 1985 due to reduction of imported parts and components. This shows that such a distorted structure characterized by a high degree of reliance on imports cannot be sustained.

Fourth, a serious defect still exists in China's industrial organization, symbolized by the lack of appropriate concentration and decentralization on the basis of co-operation among the specialized sectors. In the advanced economies, there are now parallel trends in industrial organization. On the one hand, there exists centralization of production, that is more and more factors of production are concentrated in the major specialized enterprises; on the other hand, there exists decentralization of production, that is the scattering of factors of production to mini or super-mini enterprises which co-operate with the major enterprises. Such an industrial organization enhances competitiveness. The situation in China is just the opposite. Departments, areas, and even some enterprises are obsessed with the pursuit of "big and complete" or "small and complete" goals. Indeed, there is a large number of major enterprises, but they are mostly self-contained "all-round" enterprises, not specialized ones. Though their scope may be large, the economies of scale are very small. For example, in the automobile industry, there were more than eighty commercial automobile factories in 1984 all over the country, exceeding the combined number of commercial automobile factories of six countries, namely the United States, Japan, Germany, France, Great Britain, and Italy. Obviously, most of the Chinese automobile factories cannot enjoy scale economies.

Fifth, there exists in the enterprises a common lack of innovative capacity and technological reserve which makes it impossible for them to make rapid responses

to the changing consumption trends of the people. There are two main causes for this phenomenon: the funds for technical innovation are not guaranteed and enterprises have not been given the decision-making power. This in turn makes the enterprise managers reluctant to take the risks involved in developing new products.

Sixth, the overlapping and similar industrial structures among the provinces is very serious in the light of regional industrial distribution. In matters related to industry selection, many provinces and cities vie with one another in launching popular industrial projects in disregard of their resource endowments and comparative advantages. As a result, many factories producing TV sets, refrigerators, tape recorders, and automobiles have sprung up all over the country. Most of them are small ones. For the survival of these factories, many local governments indulge in carving up the market and practising local protectionism. This is the main factor precipitating the above-mentioned lack of appropriate concentration and decentralization on the basis of co-operation among specialized sectors in China's industrial organization. This shows that industrial structural readjustment will not be effective unless underpinned by economic management reform. In addition, the lack of a clear programme for regional industrial distribution handicaps the introduction of foreign capital.

Seventh, there is chaos and disorder in product mix. The simultaneous existence of shortages and inventory accumulations is much in evidence among and within departments, trades, and enterprises. For example, in the machine tool making industry, there is an excessive supply and a large amount of production capacity lying idle. Yet machine tools worth US$400 million were imported, including 75 per cent of ordinary ones costing a quarter of this amount. There are many factors causing such simultaneous existence of shortages and inventory accumulations, the crucial ones being defects in the industrial structure and the irrational economic management system.

Eighth, agriculture faces the problem of strengthening resilience. A sample investigation undertaken in seventy-one counties of the country in early 1985 reveals a common lack of enthusiasm for grain production among the farmers. The main factor lies in the lowered incentives for grain production. Generally, the average income per workday for the agricultural and sideline products processing and catering trade is double that for grain production; while the average income per workday for transportation and industrial products processing is nearly double that for the agricultural products processing and catering trade. There has been no significant increase in rural basic installations in recent years. Moreover, there has been a decrease in the area ploughed by farming machines and/or irrigated by gravity, in addition to the annually diminishing acreage of cultivated land. Farmers and rural collectives make their investment mainly in the direction of industry and sideline occupations. What is more, prices for agricultural means of production are too high. This in turn further restraints inputs into farming. Therefore, it is a matter of great urgency to find ways to realize the specialization of farming and its appropriate scale-management, increase long-term investment for agriculture, and promote technical transformation of agriculture, so as to raise the labour productivity of farming and

increase the income of rural households engaged in grain production. Otherwise it would be extremely difficult for China to achieve the strategic goal of guaranteeing the per capita annual grain ration of 400 kilograms by the end of this century.

III. Trends in the Changes in China's Industrial Structure

The following two factors should be taken into consideration in the course of projecting and rectifying China's industrial structure: the correct understanding of China's present stage of development and China's economic development strategy.

At present, China is still in the initial stage of socialist development characterized by a low level in the development of its productive forces. China is now in a stage of transition from a low-income economy with a dual structure of coexistence of modern and backward sectors to a middle-income, single-structure modern economy. Changes in China's industrial structure will follow the general path of structural change with economic development evident in other countries. However, China's economic development will also reflect its own uniqueness due to a variety of factors. Compared with other low-income countries, China has a higher rate of capital accumulation, more typical of a middle-income country; in fact, the proportion of heavy industry in its national economy as a whole is higher than not only that of typical low-income countries, but also that of typical middle-income countries. Meanwhile, although the share of national income allocated to consumption is comparatively small, yet due to rational distribution, many indicators of the Chinese people's quality of life are approaching those for middle-income countries.

The strategic plan laid down by Secretary General Zhao Ziyang at the Thirteenth Party Congress involves three steps:

> The first step is to double the GNP of 1980 and solve the problem of food and clothing for our people. This task has largely been fulfilled. The second step is to double it again by the end of this century, thus enabling our people to lead a fairly comfortable life.[5] The third step is by the middle of the next century to reach the per capita GNP level of moderately developed countries. This will mean that modernization has been basically accomplished and that our people have begun to enjoy a relatively affluent life. Then, on this basis, China will continue to advance.[6]

China is now striving towards the realization of the second step. And the rational readjustment and reform of the country's industrial structure constitutes precisely an important foundation for accomplishing this step.

From our point of view, the direction of industrial structural readjustment in this period should (a) suit changes in the consumption structure of the Chinese people and satisfy the demand of industrialization for infrastructure and basic industries; and (b) keep abreast of the developments of the global technological revolution. In line with these considerations, the development of China's industries and their structural transformation in this century can neither follow

the proposition that priority be given to the expansion of traditional and basic industries, and consequently postpone the development of new high-tech and technology-intensive industries to the day when the former have been built up; nor the proposition that priority be given to the development of new high-tech and technology/knowledge-intensive industries. Equal attention should be given to both new and traditional industries, and a strong emphasis laid on the technical renovation of traditional industries. To be more exact, on the one hand, basic and traditional industries should be developed and transformed; on the other hand, close attention should be given to establishing and expanding new industries to combine labour-intensive ones with technology/knowledge-intensive industries and create a comparatively advanced industrial model or type of industrial structure capable of giving full play to China's comparative advantages.

1. Forecast of Changes in China's Industrial Structure

Heated discussions have been under way in China since 1986 on the basic direction of industrial structural readjustment, without reaching a consensus. General Secretary Zhao Ziyang's report delivered at the Thirteenth Party Congress incorporated these discussions and summarized the tasks of China's structural readjustment and reform for the future as follows:

> —to continue to stress the strategic importance of agriculture and to develop the rural economy in an all-round way;
>
> —to strive to develop consumer-goods industries and at the same time to pay adequate attention to basic industries and infrastructure, accelerating the development of the energy industry (primarily electric power), of the raw and semi-finished materials industry (especially iron and steel, non-ferrous metals and chemicals) and of transport and communications (principally comprehensive systems of transport and of dissemination of information);
>
> —to vigorously develop the machine-building and electronics industries, so as to provide more and more advanced technical equipment to serve the modernization programme; and
>
> —to energetically develop the building industry by commercializing housing, so as to gradually make this industry a major pillar of the economy. We must attach importance to the development of tertiary industry and strive for a co-ordinated growth of primary, secondary and tertiary industries.[7]

In accordance with the above-mentioned guidelines, the trends of development of various industrial sectors for the next decade or so are as follows.

Changing Trends in the Proportional Relationship between Heavy and Light Industries
The chief factors constraining the future development of heavy industry are energy shortage and lack of complete self-sufficiency in major raw materials as well as machinery and equipment. Based on the current consumption level, the gap between estimated production and demand in terms of output value may reach RMB50 billion by 1990, and RMB90 billion by the year 2000. Two possible

solutions to this problem are: practising restraint in the consumption of heavy industrial products, and importing the much-needed items. At present, China uses around half of its export earnings to import such heavy industrial products as steel, non-ferrous metals, chemicals, machinery, and equipment. This situation will persist till the year 2000.

In the next few years, light industry will grow faster than heavy industry. However, along with the expansion of consumer durables, the demand for raw materials, machinery, and equipment will become stronger. As a result, there would be no substantial change in the proportion of production between light and heavy industries.

In accordance with the forecast of quadrupling the 1980 gross output value of industry and agriculture by the year 2000, the average monthly consumption expenditure of urban and rural inhabitants may rise from RMB18.9 in 1980 to RMB24.4 in 1990 and RMB58.3 in the year 2000 (based on 1980 constant prices). As for light industry, in accordance with the China State Statistics Bureau's monthly per capita consumption level, and taking into consideration such factors as population increase, rise in collective consumption, export growth, and enhanced commodity ratio of agricultural products, the development of the food industry, machine-building for light industry (including industries producing durable consumer goods), and light chemical industry (chemical industry for daily use, chemical fibre, and fine chemical industry) should be accelerated.

As for structural changes within heavy industry, the trend is as follows: though the energy industry centred on electricity generating has been developing rapidly, it cannot meet the demands of a growing national economy, and has now become a bottleneck. Hence the expansion of the energy industry should be further accelerated. Even so, energy shortage is not expected to be alleviated drastically by the year 2000, due to the constraints of capital and technology. Therefore, the development of heavy energy-consuming industries such as the metallurgical and building materials industries would certainly be restricted. Although China ranks high in the world in terms of the volume of steel production, yet per capita production is still very low. As a result, since the beginning of the 1980s, it has spent several billion U.S. dollars annually on the importation of steel. In 1986 alone, nearly US$6 billion[8] were spent on the importation of 18.36 million tons of steel. It is estimated that in the final years of this century a considerable amount of imported steel will still be needed. Meanwhile, the construction of coastal iron and steel enterprises using imported iron ore should be speeded up. Because bulky building materials have low value and high transportation costs, it would be uneconomical to import them from abroad. Therefore, their adequate supply should be based upon accelerated domestic expansion. Within heavy industries, machine-building and electronic industries are the most promising. Both will be energetically promoted to become export-oriented sectors for earning foreign exchange. Meanwhile, the current unfavourable balance of trade for heavy chemical products will persist because of the restraints of energy and capital shortages on the expansion of the heavy chemical industry and the time needed for its technical upgrading.

Changing Trends in the Relationship between New and Traditional Industries
In the light of the present structure and future development needs, there will certainly be some progress for the new industries, particularly electronics, the growth rate of which will far surpass the national average.

Chinese scholars have different estimates of the possible emphasis on new high-tech industries in the gross output value of agriculture and industry by the year 2000. Our estimate puts the figure above 10 per cent. Traditional industries now occupy a dominant position in China's industrial structure, and this dominance will not change by the year 2000. In order to satisfy the basic daily needs of one billion people, the current fundamental role of the traditional industries should be brought into full play. Therefore, we believe that China will strive for a steady growth of traditional industries on the basis of speeding up technical progress and innovation. In our judgement, it would be a safe and reliable approach for China to develop traditional industries by taking advantage of the country's vast domestic market on the one hand, and revamp them as well as enhance high-tech new industries by adopting advanced foreign technology on the other hand. In his report to the Thirteenth Party Congress, General Secretary Zhao Ziyang advocated that

> We should ... expand the whole economy by emphasising the transformation and development of our traditional industries through the application of advanced technologies while at the same time developing new high-technology industries.[9]

This policy suits China's actual conditions and is therefore feasible. It should thus be taken as the country's industrial development strategy for a fairly long period into the future.

Changing Trends in the Relationship between the Extractive and Manufacturing Industries
The ratio between the growth rate of the extractive and manufacturing industries was around 1:1.4 over the past three decades, with the slower growth of the extractive industry resulting in shortages of energy and raw materials. This situation was brought about by the extractive industry's low rates of processing and resource utilization, and the rapid expansion of the manufacturing industry. To remedy this situation, in the future China should speed up the growth of the extractive industry. Meanwhile, it should also raise the degree of processing, expand the technology/knowledge-intensive industries, and lower the proportion of the high energy/resource-consuming industries.

Changing Trends in the Relationship between Production and Infrastructure
Accelerating the construction and expansion of infrastructure and raising its shares in employment, national income, and the gross social output is a major task facing China in the course of its industrial development and transformation of the industrial structure.

In the next decade, China will try its best to solve the problems of transport and electricity, two bottlenecks restraining economic growth. The forward coefficient of electricity should be raised. The increase of freight capacity and the growth of production should be harmonized to satisfy the needs of the growing rural commodity economy, regional economic intercourse, and the expansion of foreign trade.

Meanwhile, China should also accelerate the development of information and communications industries so as to overcome the backwardness of postal and telecommunications services. The popularization rate of telephone service will be raised from 0.6 per cent in 1980 to at least 3 per cent in the year 2000.

Along with the big shift of the farming population to non-farming occupations, and the growing importance of housing in the people's consumption basket, the building industry is expected to grow also rather rapidly. Taking into consideration the fact that the building industry's labour productivity improves rather slowly, the increase of employment in this sector will be faster than that in the manufacturing sector.

Changing Trends in the Proportion among Primary, Secondary, and Tertiary Sectors

The general global experience has been that, with economic growth, the share of the primary sector falls, while that of the secondary sector rises and then falls, and that of the tertiary sector rises continuously. The transformation of China's production structure will also follow this pattern, but with Chinese characteristics. Due to the rapid development of township and village industries, rural communications, commerce, and service trades, the share of the primary sector will decline, that of the secondary sector will steadily rise, and that of the tertiary sector will rise comparatively rapidly. Needless to say, due to the serious underdevelopment of the tertiary sector at present, its size will still be smaller than the other two. But the increase of commercial circulation and the enhancement of output value and national income created by service trades will surpass the increase of national income and the gross output value of agriculture and industry. The employment of the service trades will also increase faster than that in other sectors.

2. Forecast of Changes in Regional Economic Structures

As noted earlier, the overlapping of provincial and city industrial structures is very serious. As a consequence, the structural division of labour between the resource and processing provinces is very unclear and not according to the comparative advantages of resources or productive forces of the respective provinces. While the national economy is progressing, a rational pattern of division of labour among the provinces is yet to take shape. Evidently, China should improve the regional structure of its economy in the final years of this century while readjusting its industrial structure at the same time. Efforts will be made to combine these two tasks so as to create a special industrial distribution system with national and regional industries playing their respective roles while forming an organized whole at the same time.

A basic concept in the regional distribution of China's economy is the satisfactory combination of progress in the Eastern Region with the development of the Central and Western Regions.[10]

China can be divided into three major economic regions in terms of the level of economic development, degree of skilfulness of labour, distribution of natural resources, conditions of transport and communications, and economic-geographical location.

The Eastern Region comprises the provinces of Liaoning, Hebei, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong, the Guangxi Zhuang Autonomous Region, and the municipalities of Beijing, Shanghai, and Tianjin. It is located in China's coastal areas, accounting for 14.2 per cent of the nation's territory, 41.2 per cent of its population, and 45 per cent of its 400,000 industrial enterprises. In 1985, the output value of industry and agriculture of this region amounted to 56.9 per cent of the national total. Except for the Guangxi Zhuang Autonomous Region, the economic-technological basis of this region is comparatively strong, its external and internal transport and communications comparatively advanced, and its scientific, educational, and cultural levels comparatively high. Historically, it also had widespread economic, technological, and cultural links with foreign countries. Now it has become the major base area for export, making up around 80 per cent of China's total export volume. But, most places in this region are short of resources. Moreover, the region faces acute transportation strains and depends on the interior of China for most of its energy and raw material supplies.

The Central Region comprises the provinces of Heilongjiang, Jilin, Shaanxi, Anhui, Jiangxi, Hunan, Hubei, Henan, Shanxi, Sichuan, and the Inner Mongolian Autonomous Region, accounting for 34.3 per cent of the nation's territory and making up 47.9 per cent of its population. In 1985, the output value of industry and agriculture of this region amounted to 37.2 per cent of the national total. The striking feature of this region is its comparative advantage in energy and mineral resources of various metals and non-metallic minerals, and its comprehensive economic advantage in technology, science, and transport and communications. Of the forty kinds of major mineral resources in the country, more than half (thirty kinds) come from this region. In the Sixth Five-Year-Plan period, the Central Region earned foreign exchange approaching US$3.1 billion from export, accounting for 12 per cent of the national total.

The Western Region comprises Xinjiang, Tibet, Ningxia, Gansu, Qinghai, Guizhou, and Yunnan, accounting for 51.5 per cent of the nation's territory but only 6.4 per cent of its population. In 1985, the output value of industry and agriculture in this region amounted to 5.9 per cent of the national total. The region is comparatively rich in natural and animal husbandry resources, but it has the following disadvantages:

a. poor biological environment;
b. weak industrial and agricultural foundations;
c. underdeveloped commodity economy and scientific-tehnological and cultural undertakings;
d. meagre qualified personnel; and
e. poorly developed transport and communications systems.

Taking into consideration the realities of the above-mentioned resource distribution and uneven development of productive forces, China should give full play to the important role of the comparatively economically-advanced Eastern Region in importing from the outside world and linking with the interior of the country in the remaining years of this century, while gradually speeding up the development of the Central and Western Regions at the same time. Thus each region will be able to give full play to comparative advantage. Consequently, a rational division of labour among the regions and an ideal regional economic structure will emerge through mutual opening and equal exchange.

In late 1987 and early 1988, after having conducted two inspection tours of coastal provinces and cities, General Secretary Zhao Ziyang made a proposal concerning the development strategy for the coastal areas. He suggested that these areas should grasp the current opportunity of structural adjustment in the developed world, and bring their comparative advantages into full play by developing labour-intensive industries and building up an export-oriented economy so as to take their place in the international market gradually and in a guided way. He pointed out that

> If the coastal areas, including the Zhujiang [Pearl] and Changjiang [Yangtze] River Deltas, the Southern Fujian triangle, and the Shandong and Liaoning peninsulas, fulfil their potential on the international market, and develop a solid export-oriented economy, this will not only expedite the economic development of the coastal areas themselves, but will certainly also boost the development of the central and western regions.

To realize this strategy, China should first "lay emphasis on developing labour-intensive industries", for example processing with supplied and imported materials, developing the power industry so as to overcome energy shortage, expanding the building materials industry, and building some high-tech industries. Second, China should follow the principle of "putting both ends of the production process (the supply of raw materials and the marketing of products) on the world market",[11] and import raw materials and export products on a large scale. This is indeed a fairly attractive strategic concept. We believe concrete measures will be worked out for its prompt implementation.

At present, the majority of Chinese economists have reached a consensus on the medium- and long-term programmes for China's regional economic structure. Bearing in mind the overall interests of the national economy, they maintain that in the 1986-95 period, China should emphasize industrial development in the Eastern Region and the large-sized energy bases in Shanxi, Inner Mongolia, and Western Henan in the Central Region. This will constitute a crucial step in ensuring the smooth advance of the entire national economy into the 1990s through accelerated tackling of three essential factors of production (energy, capital, and technology) which constrains the all-round development of the national economy. By the middle of the 1990s, the Central Region will gradually become the priority area for economic construction. Apart from continuing the building of the above-mentioned energy bases, the Wuhan-Yichang-Chungqing

industrial belt along the Changjiang (Yangtze) River centred on the construction of the huge Three Gorges power station and the Zhenzhou-Xian-Lanzhou industrial belt along the Lunghai railway will be strengthened, thus turning these two industrial belts into bridgeheads for supporting massive development of the Western Region in the future. With the arrival of the twenty-first century, the priority area for economic construction will gradually shift to Southwestern and Northwestern China, by turning such provinces and autonomous regions in the Western Region as Sichuan, Yunnan, Guizhou, Xinjiang, and Qinghai into major industrial bases.

The industrial development strategy for the three major economic regions up to the end of this century may be summarized as follows:

Transforming and Revitalizing the Old Industrial Base. After the progress of three or more decades, the Eastern Region has become the most advanced area in the country. Due to past deviations in the guiding principle, however, China neglected to transform and upgrade this old industrial base in time with advanced technology, resulting in ageing industrial, product, and technological structures and other aspects. The Chinese Government has now given priority to economic construction in the Eastern region. It will speed up development in the four Special Economic Zones, fifteen open port cities, and such Economic Development Areas as Hainan Island, the Pearl and Changjiang River Deltas, the "Golden Triangle" in South Fujian, and the Liaodong and Jiaodong Peninsulas to form step by step a coastal industrial belt and simultaneously an open economic belt stretching from Dalian Port in the north to Beihai City in the south, capable of giving full play to its comparative advantage in economic/technological progress and economic co-operation with foreign countries.

In relation to the industrial structure in the coastal belt, China will pay attention to expanding labour-intensive and/or labour-intensive-cum-knowledge-intensive industries. But in cities with more advanced economic and scientific-technological foundation such as Shanghai, it will gradually shift priority to technology/knowledge-intensive industries and strive for the sophistication of its industrial and product structures by raising the international competitiveness of its export-oriented products to meet the needs of the international market and by energetically promoting the production of high-grade, precision, and advanced industrial products and such service trades as information and consultancy. The Eastern Region will undertake the task of introducing and absorbing foreign advanced technology, and spreading to the interior of the country this foreign as well as its own advanced technology. At the same time, the Eastern Region should also play the role of a door and bridge, that is become a base for launching new industries and upgrading the products of old ones by adopting new technologies, and at the same time become a major base for earning foreign exchange through exporting.

Tapping the Great Potentials of the Central Region. This region has been the centre for major construction investment since 1958. Its rich energy resources and

abundant mineral resources of chemical materials and ferrous and non-ferrous metals determined its strategic position of "linking up" the Eastern and Western Regions.

What merits attention is the fact that since the sixties an industrial system based on heavy industries has taken shape in this region. This includes nuclear energy, metallurgical industry, spaceflight, aviation, electronics, and chemical and machine-building industries. This industrial system is staffed with a strong contingent of scientists and research personnel. In the defence enterprises, there are a number of highly qualified scientists and technicians, with great potentialities for the economic development of this region. China will strengthen the development of energy resources, exploit and utilize the metallic and non-metallic resources in this region, launch new industries, and upgrade traditional ones. In some central cities in this region, it is possible to establish technology-intensive zones for new industries, and major military and civilian enterprises will be encouraged to stretch out their antennae to the coastal region.

Making Initial Preparations for Large-Scale Development of the Western Region. The Western Region is an area yet to be developed. Large-scale initial preparations for development in this region should be made in the eighties and early nineties. For this, China should strengthen general resource surveying and prospecting; give priority to developing the rich deposits in this region which are badly-needed by the country at present; improve local transport and communications; and utilize the comparative advantage of this region in agricultural resources to promote the processing of agricultural and animal husbandry products.

3. Forecast of Changes in the Commodity Structure of Foreign Trade

The existence of foreign trade has a strong impact on changes in a nation's industrial structure. But apart from industrial structure, there are still many factors influencing a nation's import-export commodity structure, such as the demand and supply structure of the international market, natural resource endowment, level of scientific-technological development, size of domestic market, degree of economic openness to the outside world, socio-economic system, and stage of economic development. Generally speaking, changes in the industrial structure have a bigger and more direct impact on outward-oriented small market economies than on large, domestic-demand-dominant planned economies.

China is a large socialist country with one billion people. It is still in the early stages of industrialization, with its commodity economy underdeveloped, and its opening to the outside world just begun. For a long time, foreign trade played only a secondary role in regulating surplus and deficiency in the development of China's national economy. Generally, the connection between import and the economic development plan or industrial policy (mainly in the 1952-57 First Five-Year-Plan and the 1976-80 Sixth Five-Year-Plan periods) is more direct; export has no co-ordinated linkage whatever with industrial policy as a whole, and its basic function is to earn enough foreign exchange to pay for imports.

Therefore, the export commodity structure only passively reflects China's industrial and agricultural production, being dominated by labour/resource-intensive industries.

In recent years, the state has formulated a policy of striving for the realization of the dual shifts in China's export commodity structure, namely the shift from primary products to manufactured goods, and the shift from low- to high-degree processing. As a result, the proportion of new products and high-degree processing goods has risen among the export commodities. But changes in export commodity structure are constrained by many factors, some of which can be improved in the short term, while the improvement of others needs a longer time.

China's policy is to adopt an export promotion strategy for such labour-intensive products as textiles and light industrial goods, and for agricultural and mineral products. This is the foundation of the current strategy model for foreign economic and trade relations, because China still enjoys comparative advantage in these respects. On the other hand, compared with advanced countries, China evidently does not, on the whole, enjoy comparative advantage in the high-technology products.

For the time being, exports of mechanical, electrical, and chemical products still play only a secondary role, but their importance will gradually rise and eventually replace primary and labour/resource-intensive products in China's strategy for foreign economic and trade relations.

The realization of the above-mentioned strategy will certainly be reflected in changes in China's import-export commodity structure. Taking into account the needs of the international market and its comparative advantage, China will energetically promote those industries and products for export which enjoy international competitiveness, and show quick and better economic results. Meanwhile, China will also strive to raise the quality of its export commodities and penetrate the international market in a multidirectional way. The emphasis of import shall be on the introduction of technology and key equipment. Whatever major equipment and other products that are suitable for domestic production will be produced inside the country.

In readjusting China's export commodities, China will on the one hand utilize the comparative advantage of the existing name brand commodities, bringing their mainstay role in earning foreign exchange into full play, and on the other hand support those new commodities which do not evidently enjoy comparative advantage for the time being, yet have great potentialities, so as to let them replace gradually those commodities which are losing in comparative advantage. In the short term, primary products, textiles, and light industrial goods will still be the major items for export because they still enjoy comparative advantage. Oil and coal will also be exported in large quantities. Meanwhile, the export of products of agriculture and sideline occupations will also be enhanced. For textiles and light industrial goods, the chief task is to raise their unit-added-value and bring about the shift from reliance on quantitative increase for export growth to reliance on qualitative improvement and better economic results by transforming popular low- and medium-grade goods into high-grade ones and diversifying their varieties and specifications.[12]

In the meantime, China should develop its potential advantage for export of mechanical and electrical goods. China has already established a system of machine-building and electrical equipment industries with complete sectors, advanced equipment, modern technology, and qualified technical personnel. In 1984, the original value of the fixed assets of China's machine-building and electrical equipment industries amounted to 24 per cent of the national total. In 1985, the gross output value of machine-building and electrical equipment industries reached RMB234 billion, almost double that of 1980, with an average annual growth rate of 14.4 per cent. China's machine-building and electrical equipment industries should take up and are fully capable of taking up a bigger share of the global export of mechanical-electrical products in its export commodity composition in the final years of this century.[13]

As for the import commodity structure, in the light of the above-mentioned projected industrial policy, the following changes are expected to take place by the end of this century.

1. The import of the means of production will occupy a dominant position and that of the means of livelihood a secondary position. The proportion of the means of production in China's import will rise while that of the means of livelihood will fall, although the absolute volume for the latter will rise.
2. In the composition of the means of production, the imports of machinery, equipment (including technology), and industrial raw materials will rise, while imports of the materials for agricultural production will correspondingly fall.
3. For imports of machinery and equipment, attention will be paid to raising the proportion of software technology and appropriately reducing the proportion of complete sets of equipment.

IV. Impact of China's Industrial Structural Readjustment on China-ASEAN Economic Relations

First of all, it is assumed here that China will largely achieve its project goals of industrial structural readjustment and that the current trend of growing China-ASEAN economic relations will also continue. Taking account of possible uncertainties in mutual relations, the general trend in bilateral relations are as follows:

(1) It can be expected that China's national economy will register a steady growth with rationalization of China's industrial structure, improvement in specialization, rationalization of the scale of operation, and the widening of the scope of reform of the economic management system, thus fulfilling its development goals. We also believe that ASEAN nations will also accomplish their respective tasks of economic readjustment in response to changes in international economic conditions and further enhance their respective economic strength. Thus, the

possible scope for economic co-operation between ASEAN nations and China will certainly increase.

(2) By the end of this century, China's economy will gradually develop a comparatively rational, multi-level structure suitable to its special features and its stage of development. It will possess a comparatively developed integrated industrial system and a modern agriculture with a comparatively harmonious development of farming, animal husbandry, forestry, fishery, and other sideline occupations. Industry will largely employ medium technology, but there will also exist some high-tech industrial sectors such as spaceflight, nuclear energy, bio-engineering, information, laser, and new materials industries. Compared with other developing countries, China has a greater scientific-technological strength. China will still have a large number of enterprises employing a comparatively backward technology and means of production, turning out low-grade products with a low degree of processing. Set against the level of division of labour in the world economy, and in the light of China's current stage of economic development, China will still lay the stress on expanding traditional industries including iron, steel, automobile, shipbuilding, heavy chemical, textiles, food, and building industries in this century and beyond.

ASEAN countries, except for Singapore, are resource-rich countries, and this is where their comparative advantages lie. From the sixties to the early eighties, their economic growth depended mainly on the export of primary products. But after twenty and more years of rapid economic growth, Singapore has become a newly industrialized country with some high-tech industrial sectors. Malaysia, the Philippines, and Thailand have also laid a fairly solid foundation for their manufacturing industries. Indonesia started its industrialization later than the other four, but is vigorously catching up. Since modern industries in ASEAN countries were mostly set up by foreign direct investment, generally they are more competitive. In addition, ASEAN countries, except for Singapore and Brunei, have emerged from a monoculture or reliance on a few crops and made remarkable achievements in the diversification of their agricultural production. This is particularly true of Malaysia and Thailand. ASEAN can be considered as an economic entity boasting of a multi-level industrial structure.

With such a multi-level industrial structure, ASEAN countries and China have the following advantages for the development of mutual economic and trade relations.

a. *China will possibly become a bigger market for industrial raw material from ASEAN countries.* The new technological revolution and shift of industrial structure in advanced Western countries in the direction of high technology have led to stagnation and even decline in imports of industrial raw materials from the developing countries, including ASEAN nations. Under such circumstances, it is quite possible that China will absorb an increasing part of ASEAN's industrial raw materials. China annually imports from abroad millions of tons of iron ore to meet the needs of its coastal ironworks. Beginning from 1985, China has been importing around 100,000 tons of iron from Malaysia. This represents only a

small fraction of China's imported iron. China also needs to import copper and the Philippines can become an important supply source. For a long time to come, there will be a need for China to import timber, an important export of the ASEAN countries. Though China is a major exporter of textiles, it is not fully self-sufficient in some chemical fibres, and needs to import these from foreign countries including Singapore and Thailand. Also, demand for automobiles is rising rapidly in China. In 1984 and 1985, China imported over 600,000 cars from abroad, at a cost of more than US$4 billion, far exceeding the projected investment allocated to the automobile industry in the Seventh Five-Year-Plan period. By the year 2000, China is expected to have 13 to 15 million automobiles, or 4 to 4.7 times the 1985 figure. Obviously, a way out should be sought in domestic production. This will evidently provide a growing export market for rubber for ASEAN countries.[14]

b. *The economic and trade relationships between ASEAN and China are mainly based on a horizontal division of labour.* There exists the possibility of exchange from primary to high-tech products. Industrial manufactures are many and varied, and their variety will further increase with economic and technological progress. This will expand mutual economic and trade relations. The point is whether or not each country can provide the other with good quality products at competitive prices. China's machine-building industry possesses a comparatively powerful production capacity and some independent research and development ability. It is expected to constitute a major export commodity in China's long-term economic programme. But thus far mechanical and electrical products make up only a small proportion of China's export commodities to the ASEAN countries, mainly because of inability to meet the requirements of quality, variety, complete sets, and after-sale service. If significant progress could be made in China's technological upgrading and reforms in industrial organization and management system (including the foreign trade system), these defects in China's mechanical and electrical products can be corrected and their competitiveness in ASEAN countries enhanced.

So far as ASEAN countries are concerned, their exports to China also underwent compositional changes in the late seventies. Apart from traditional primary products, other products — steel, offshore drilling platforms, kinescopes, refrigerators, car parts, chemical fibres, plywood, cement, pesticides, and chemical fertilizers — have also been exported. With progress in industrialization, the export of manufactured goods from the ASEAN countries to China will increase in quantity and variety. Apart from the traditional textile and light industrial products, the more competitive products which China may be able to provide in the future are as follows: ships, machine tools, farm machinery, medicine, medical equipment, computer software, and laser and spaceflight equipment.

c. *Mutual transfer of suitable technology has a bright future.* In recent years, ASEAN countries have transferred to China many items of suitable technology through such channels as joint-ventures, project contracting, personnel training, under-

taking technical revamping of factories, and patent selling. Though transfer of suitable technology from China to ASEAN began only in the last several years, it will grow with progress in China's economic reform and readjustment. Chinese authorities concerned have already received nearly thirty thousand applications for patent rights, mostly items of suitable technology needed in the developing countries and capable of being marketing abroad. Between 1979 and 1987, China's total export of technology reached around US$0.2 billion, covering matured industrial expertise, various kinds of new technologies, skills of traditional arts and crafts, and a small amount of laboratory technology. Among the countries and regions which imported technologies from China are Japan, the United States, United Kingdom, Sweden, Switzerland, Federal Republic of Germany, Democratic Republic of Germany, Brazil, Nepal, Burundi, and Hong Kong.

d. *Complementarity in agricultural products exists between ASEAN countries and China due to differences in natural environment, geographical conditions, and development priority.* This has been demonstrated by years of trading practice and technical exchange in agriculture between the two sides in recent years. Reform and readjustment of economic structure in China's countryside will increase the variety of China's agricultural products. Meanwhile, ASEAN countries are also striving for diversification of their agriculture. This trend will certainly further strengthen agricultural complementarity between the two sides. Thailand used to show concern that it would clash with China in the export of grain on the international market. In reality, however, in recent years China's grain export has not posed any threat to Thailand. The main reasons for the non-existence of threat are as follows: (a) China only exports a small volume of grain annually, chiefly for regulation of variety; (b) China also imports a considerable volume of grain annually from foreign countries including Thailand, and in lean years the amount of import is usually larger than that of export; and (c) Thailand evidently enjoys comparative advantage in grain production over China. For the long-term, China should work very hard to achieve the goal of an average annual per capita holding of 400 kilograms of grain by the end of this century. However, even if this goal is achieved, it would still represent only a low level of self-sufficiency. Besides, China's Southeastern area, which keeps close economic relations with ASEAN countries, would give priority to economic crops, aquatics breeding, and other sideline occupations instead of grain production, due to scarcity of land and over-population. With the ease of transportation, it is quite possible for the Southeastern coastal area to import a certain amount of grain for a long time to come. Meanwhile, it is also quite possible for this area to import a greater amount of food or other agricultural products from ASEAN countries as a result of the implementation of the development strategy calling for more trade.

(3) The formulation of China's industrial restructuring programme will be able to provide a better guide to the direction of foreign investment. Though China has already promulgated a series of laws and regulations on foreign investment, the absence of a well-defined, long-term industrial structure, and industrial

sectoral structure programme has meant that the regulations on foreign investment are not well-defined. This has made the foreign investors, including those from ASEAN countries, in need of a dependable basis when selecting investment projects and assessing their feasibility, thus affecting their enthusiasm for investment in China. The improvement of China's investment environment calls for greater efforts from the departments concerned, but the formulation of an industrial structure programme is no doubt the prerequisite.

(4) China's search for a structural policy in pursuit of establishing stable regional economic relations will have a far-reaching impact on its economic relations with ASEAN countries. As these countries are China's close neighbours, they ought to have a bigger role in China's foreign relations. It is not difficult to recognize from the above analysis that there exist advantageous conditions for establishing structural co-operation between ASEAN countries and China. But in projecting a long-term economic relationship with these countries, China is faced with some uncertain external factors, including some non-economic barriers. These cannot be solved by China's unilateral effort.

(5) Readjustment of China's industrial structure will strengthen China's economic vitality and consequently its competitiveness with ASEAN countries. Of all the ASEAN countries, Singapore's level of economic development is in a general sense more advanced than that of China, therefore its complementarity with China is more striking. Brunei produces mainly oil and does not compete with China. As for the other four ASEAN countries, there will be unavoidable competition with China in certain products in the international market, because they are quite similar to China in the level of economic development.

What merits exploration here is the impact of China's coastal area development strategy on its economic relations with ASEAN countries. As noted earlier, in this vast area a method called *san lai yi bu* will be widely adopted for developing export-oriented labour-intensive industries with foreign investment. *San lai yi bu* literally means "processing with materials sent in from abroad, manufacturing according to the designs and patterns sent in, assembling with parts sent in, and engaging in compensation trade", or processing, for short. Remarkable progress in adopting this method has been made in the Pearl River Delta in Guangdong Province in recent years by absorbing investment mainly from Hong Kong and Macao for boosting rapid economic advances.

Guangdong's success story hinged largely on its advantage of geographical proximity to Hong Kong and Macao. Therefore, in our view, the success or failure of the other provinces in following the Guangdong model will depend to a considerable extent on whether or not they will be able to absorb foreign investment from other countries and regions. This calls for strenuous effort on the part of these provinces to improve their investment environment, one that allows foreign businessmen to run foreign-funded enterprises according to international norms practised in most countries. In our judgement, the export-oriented labour-intensive industries characterized by the *san lai yi bu* method will be developed mainly in special economic zones and coastal open cities and areas.

If the advantage of low-paid labour can be maintained in the coastal areas, then bright prospects may be in sight. As for the types of products, judging by demands in the international market and China's comparative advantages, the development of such industries as footwear, garments, toys, household electric appliances, metal fittings, new building materials, general electronics products, plastic products, and food seem to have good prospects.

It should be pointed out here that with the diversity of labour-intensive industries and products, China and ASEAN countries can help supply each other's needs, for instance textiles, clothing, household electric appliances, leather and wood products, and furniture. Nevertheless, since most ASEAN countries are exporters of labour-intensive products, there unavoidably exists competition between them and China in the third countries. And, this competition will possibly intensify with the implementation of the export-oriented development strategy in China's coastal areas.

Besides, there also exists some competition between ASEAN countries and China in attracting foreign investment. The prevailing international opinion is that the investment environments in the ASEAN countries are somewhat better than that in China. But if China's industrial restructuring progresses smoothly, especially if the export-oriented development strategy together with other supporting measures are carried out in time in China's coastal areas, then its inherent or potential advantages such as low-paid labour, stronger scientific-technological power, and vast market for import substitution will appeal to foreign investment more strongly.

While China will compete with ASEAN for foreign investment, the vigorous development of labour-intensive industries in China's coastal areas will also provide entrepreneurs in some ASEAN countries with opportunities for investment because these labour-intensive industries are precisely what these entrepreneurs are familiar with, in addition to being suitable for the size of their capital, technological level, and managerial experience. For example, Thailand is China's strong competitor in labour-intensive industries, yet it is precisely the Thai businessmen who have shown intense interest in investing in such Chinese industries.

Finally, it should be pointed out that China will depend mainly on its domestic demand for economic development for a considerably long period of time into the future, and the share of foreign trade in China's GNP will continue to be small. It is therefore unrealistic to expect intense competition between ASEAN countries and China in international trade in the foreseeable future. What is more, due to differences in industrial structures, the industrial projects designed to attract foreign investment by both China and ASEAN are also somewhat different. More importantly, both the ASEAN countries and China are developing countries. They are both striving to improve their status in the international division of labour and trying to do away with the irrational international economic order. Furthermore, they are both faced with the threat of trade protectionism from the advanced countries. Common interests will help enhance mutual economic relations.

NOTES

1. *The Seventh Five-Year Plan for National Economic and Social Development (1986–90)* (Beijing: People's Publishing House, May 1986).
2. Zhao Ziyang, "Advance Along the Road of Socialism with Chinese Characteristics, Report Delivered at the Thirteenth National Congress of the Communist Party of China, 25 October 1987", *Collection of Documents of the Thirteenth National Congress of the Communist Party of China* (Beijing: People's Publishing House, November 1987).
3. For information on figures related to proportion in China's agriculture, light and heavy industries in the earlier years, see *China Statistics Year Book, 1985.*
4. "Answers to Questions about the Transparency Degree of China's Foreign Trade System", *International Trade Daily* (Beijing), 20 January 1988.
5. Roughly symbolized by US$800-1,000 per capita GNP.
6. Zhao Ziyang, op. cit., pp. 14–15.
7. *Collection of Documents of the Thirteenth National Congress of the Communist Party of China, p. 20.*
8. *China Statistical Digest 1987* (Beijing), p. 91.
9. Zhao Ziyang, op. cit., pp. 19–20.
10. Ibid.
11. *The People's Daily, 23 January 1988.*
12. Some Chinese scholars believe that the products of the following labour-intensive industries should be chosen for export: (a) textiles and clothing, the major foreign exchange earner; (b) food processing and beverage industries; (c) light industries producing such products as clocks, toys, cosmetics, ceramics, and articles of arts and crafts; and (d) machine-building and electrical equipment industries producing such products as household electrical appliances and general-purpose machinery and their components or spare parts. See Wang Jian, "Seek Development in the Grand International Economic Cycle", *International Trade Daily,* 1 December 1987 and Zen Xianlin, "Use Earning Foreign Exchange Through Export as a Breach Revitalize Light Industry in an All-around Way", *The People's Daily,* 18 September 1987.
13. Wu Xiang, "Assess the Possibility of Our Machine Tools Export from the World Market Situation", *International Commerce Daily,* 9 June 1987.
14. Lin Gang, "Our Country Will Speed Up the Production of Sedan Cars", *The People's Daily,* 16 September 1987; Also Lin Gang "Sedan and Lorry: Pillar Industry", an interview with Chen Zutao, president, China Association for Car Manufactures, *The People's Daily,* 23 September 1987

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3
Policies, Mechanisms, and Institutions Affecting ASEAN-China Economic Relations

Paul Chan

I. Introduction

There are two main sections in this study. The first reviews the strategic policy dimension and posture of ASEAN members in their external economic relations and their implications for ASEAN-China economic relations. The second examines the policy instruments and institutional mechanisms of individual ASEAN countries which have evolved in response to the economic opening up of China and in the context of its new economic relationship with ASEAN countries.

It is inaccurate to suggest that there is a collective ASEAN posture with regard to external economic relations with China. To date there are no official ASEAN-wide policies and institutional mechanisms which constitute the official conduits for economic relations between ASEAN as a group on the one hand and China on the other. All existing economic relationships, particularly at the governmental level, are conducted at the national level on a bilateral plane.

There are, however, some ASEAN private sector initiatives to approach China collectively. The approach is nascent and at the brainstorming stage. In particular, the G-14 for ASEAN Economic Co-operation and Integration, initiated by ASEAN-Chambers of Commerce and Industry, has suggested collective ASEAN initiatives with socialist economies which include China. But, for its rhetoric and numerous recommendations, the question of the China-ASEAN economic relations was deliberately made a low priority and conspicuously kept at a low profile.

However, with respect to its external economic relationships with other countries, ASEAN has developed various institutional mechanisms and broad pro-active policies collectively to have dialogues with major countries (particularly the United States, Japan, and EEC members) and to have a common stand on certain global economic issues (particularly in trade and protectionism). There are definitely areas of commonality and shared interests in regional and global

economic issues, and it is in these that one can identify a common, if not collective, policy position. In spite of this, we must recognize that there are substantial differences in views and postures among the ASEAN countries on various global economic matters. The following section will highlight some of these collective ASEAN policy positions.

II. ASEAN Management of External Economic Relations: Implications for ASEAN-China Relations

All ASEAN members are major trading nations. Indeed the principal source of economic growth is trade. Thus all the ASEAN primary commodity producers need the industrial markets of advanced economies. And all ASEAN members, because of their small domestic markets, adopt the strategy of export-driven industrialization. In many ways, ASEAN countries are price-takers and market-takers for almost, if not all, their major exports. This really means they generally have no control of the external economic environment.

In their search for opportunities, future directions, and options, ASEAN countries are now confronted with the following threats:

1. The practice of economic mercantilism by the economic powers which adopt a two-pronged strategy of carving out international markets among themselves while protecting their domestic markets. This threatens the success of ASEAN industrialization programmes.
2. The long-term decline of primary commodity prices due to technological innovations and the decoupling of the primary industry from the manufacturing- and information-based industry. This undermines the existing production base of most ASEAN economies.
3. The increasing competition from other Newly Industrializing Economies and other low wage economies. This pressurizes ASEAN countries in their search for viable alternatives.
4. The uncertainties of the global financial and foreign exchange systems. This disrupts the functioning of the real economy.

These are external factors which can destroy the short-term growth plans and long-term development strategies of the ASEAN economies. And these are the parameters which ASEAN countries must thus respond to in the management of their external economic policies and strategies.

The commonality of interests among ASEAN countries thus lies in their dependency on the external markets and the threats of the international economic environment. This provides the arena for convergence of common economic interests and policy stance.

It is clear that the use of economic diplomacy by ASEAN countries is for the enhancement of their overall economic security and long-term economic growth and is not aimed at geopolitical objectives. The strategies have no relation to geopolitical issues in the Asia-Pacific region. In addition, these policies and game

plans are problem-targeted and sector-specific. They are used as part of overall economic diplomacy.

Because of the wide ramifications and diffused impact of these external economic management policies and economic diplomacy of ASEAN countries (and for that matter China's), it is inevitable that their economic interests would overlap in both mutual benefit and conflict zones. This is inevitable even though the geo-economic objectives of the individual ASEAN countries are different from China. The reason is because ASEAN has few strategic export-led options. For instance, there is a wide range of export strategies and export directions which both similarly exploit.

The economic statecraft of ASEAN countries includes a wide range of strategies, depending on the situation and country group. First, occasionally ASEAN countries have used the tactic of geopolitical security in negotiating for bilateral benefits from the non-communist economic powers. Thailand and Singapore have used this type of strategy. Second, while not as sophisticated as South Korea and Taiwan, individual ASEAN members have also begun to use lobbying tactics. The recent controversy over palm oil between Malaysia and the United States exemplifies this. Third, mechanisms like bilateral dialogue sessions, including the "6 plus 5" and "6 plus 1" approaches, between ASEAN as a group and the major industrial powers are now institutionalized into the foreign relations framework of ASEAN and effectively used. Fourth, ASEAN members have also collectively and individually actively used regional institutions and international organizations like GATT to articulate their aspirations and positions on economic matters which affect their well-being. Last, ASEAN countries also use various strategic trade-offs in trade and market access negotiations. Thailand liberalized the import of soya bean products for the United States as part of bilateral reciprocity.

During the last three years, as a response to the challenges of the world economic downturn, ASEAN reformulated its economic strategies to regenerate positive economic growth. Singapore and Thailand are exemplary of this energetic search for new directions and export markets, and they have succeeded quite well. All the ASEAN countries now attach priority to trade policy which can promote manufactures and agricultural exports and investment strategies which can encourage the inflow of foreign capital and technology.

As early as 1973, ASEAN collectively made a policy stand on international commodity issues, including the synthetic rubber negotiation with Japan and tariff preferences on ASEAN-sourced products with the EEC. Since 1976 dialogue sessions were initiated with Australia, New Zealand, Canada, Japan, and the United States (started in 1977) and international organizations like the United Nations Development Programme (UNDP) and United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). In some cases, like the European Community (EC) and Canada, formal co-operation agreements were signed. Such dialogue sessions are not only useful mechanisms for reviewing trade-related and market-access issues but have been instrumental in creating more than seventy programmes and projects for economic development. Examples of these mechanisms are the ASEAN-Australia Economic Programme (1975), the

ASEAN-Canada Joint Co-operation Committee (1981), and ASEAN-EEC Co-operation Agreement (1980). The latter expedited the setting up of an ASEAN Trade Promotion Centre to promote ASEAN exports in the EC. The ASEAN-Japan co-operation programme started in the 1970s. Presently, two ASEAN Industrial Projects (AIPs) are funded by the Fukuda Fund.

In recent years the ASEAN members have expeditiously used such dialogue sessions for the purpose of negotiation of Generalized System of Preferences (GSPs) at the bilateral level. This mechanism is an effective supplement to other international forums to protect the international economic interests of ASEAN members.

Incidentally, although a growing portion of ASEAN external relations is now focused on economic matters, it is the ASEAN Foreign Ministries which dominate the dialogue sessions. The present structure of the ASEAN organization is such that ASEAN economic ministers have a somewhat smaller role. With economics occupying a more centralist role, it would be appropriate to enhance the status of the ASEAN economic ministers so that foreign economic diplomacy is given priority status.

Because of the strategic importance of ASEAN, overtures are being made by other nations, like South Korea, to ASEAN to institutionalize similar dialogue sessions.

On the whole, the perception of China regarding ASEAN economic management strategies must be explained in terms of her domestic politico-economic philosophy and her long-term geopolitical, geostrategic, and economic game plans in the international and regional arenas.

The author's discussions with both Chinese officials and academics in China have confirmed that one needs a lot of empathy to understand Chinese foreign economic diplomacy as it is more complex and subtle than are usually simplified to be. To begin with, the importance of the domestic context and the Chinese vision of their global position in the international setting must be given priority understanding as this determines all their initiatives, reactions, and responses to external political and economic events.

Like other major powers, Chinese foreign economic diplomacy and trade policy are instruments for increasing national power as much as they are also an extension of the latter. To begin with, the present reform-oriented leaders are convinced that a higher level of economic wealth and national power can be achieved without losing China's national bearing. Secondly, to achieve this goal and for her to catch up, China needs a stable regional and international environment. Thirdly, they recognize the vital strategy of China's effective role in the international economic arena and that of foreign participation in her economic progress. Fourthly, China has an independent stance and pragmatic attitude in its international economic and foreign diplomacy. However, in this region it has the following priority interest ranking, namely the global powers comprising the United States, the USSR, and Japan; regional flashpoints comprising Indochina, Taiwan, and Korea (North and South), and the sub-regional ASEAN group. The superstructure governing all these is of course China's four cardinal principles for domestic politico-economic management and

five principles for the conduct of foreign affairs. In effect, this means that Chinese response and reaction to external stimuli would not be *ad hoc* but are statecrafted within this framework for the realization of her long-term goals. On the other hand, ASEAN countries do not have this long-term perception for their own role in history. Consequently, their responses may not be so consistent.

Thus it would be obvious that ASEAN's economic diplomacy and management of external economic policies would be assessed by China in the light of the above guidelines which they have formulated for themselves. In this respect, then, China would be supportive of all ASEAN's initiatives which contribute to the stability of the international and regional economic setting and the expansion of export market opportunities. None of these actions could be perceived to aim for economic hegemony at the market, product, or spatial levels. Indeed all external efforts of ASEAN, for example, in penetrating markets of industrial economies, supporting stable commodity prices, and rejecting economic hegemony, also have positive spin-offs for China since there is a coincidence of economic interests. So too are ASEAN's active overtures to the United States, Japan, and the EC countries regarding investment participation in this region acceptable to China, for they are congruent with the geopolitical and geostrategic interests of China's triangular relationship with these economic powers.

At the moment, China is making tremendous effort to develop its foreign trade system and policy. In line with this and its aspiration to have effective participation in the international economic system, China has applied to become a member of GATT. Absorption of China into GATT would further add orderliness into the global trading system. The problem, in the short run, is how China can reconcile its own economic system and practices to the rules of GATT. ASEAN members would be positive toward China's application. In the short run, the mutual interests of both groups would guarantee that they support each other within GATT. However, in the longer term, China's benefits from GATT would make her more competitive *vis-à-vis* ASEAN countries as some of them would be graduated out with rising per capita income. Singapore suffered because of this lopsided criterion when New Zealand delisted her from its GSP. ASEAN therefore recommends new trading rules which recognize disparity of economic resource wealth and adjustment problems of the non-advanced economies. This also means that ASEAN should not compromise on Part IV of GATT which accords less developed countries special protection.

A related issue on reciprocity which the advanced countries can use to control the trade policy of ASEAN concerns the embargo of resale and re-export of "strategic goods and services" to socialist countries. This refers to certain types of technology and information-based products which can be used for military purposes. On this sensitive issue, the United States has specifically articulated that certain powerful computer products are not to be redirected via ASEAN. Singapore has been strongly advised over this with respect to sales of such items to the USSR and China. Depending on the types of technological products and services restrained from being resold, the role of Singapore in assisting China, which has increasing needs in its technology development, would be constrained. It is not probable that ASEAN countries would disagree with the directives of

countries like the United States since they themselves need the technology to improve their competitiveness. This is one sensitive spot in the triangular relationship between ASEAN, China, and the advanced non-communist countries which must be carefully monitored.

China would also share ASEAN's protest over the demands of industrial economies on trade in services and trade-related investment issues in the Uruguay Round. Besides, she would also back ASEAN's insistence on standstill and rollback in trade protectionism by the advanced countries. Here, there is commonality of interest between China and ASEAN in having a joint stand against the protectionist measures of the industrial countries in textiles and apparel, (for example, the U.S. Textile and Apparel Act of 1987), allegedly aimed at low-wage and socialist countries. China and some ASEAN members like Thailand and Singapore have a growing textile and apparel industry which is now facing hostile protectionist threats from the United States and other OECD members. It is to their interest if these products are under GATT rules after the Multi Fibre Arrangement expires in 1991.

In addition, ASEAN's fight against other forms of protectionism, as well articulated by the Singapore Prime Minister in the U.S. Joint House of Congress speech in 1986, directly benefits China's emerging modernization programme and her search for export markets. These include the rejection of threats from omnibus trade bills like the Jenkin's Bill and HR-3, voluntary export restraints (which has hurt China, Indonesia, and Thailand's export of certain agricultural products), and the use of unilateral protectionist measures under the criterion of market disruption.

ASEAN is also suggesting the phased reduction of subsidized agricultural exports and special and differential treatment for tropical and agricultural, resource-based products. The former is indeed an impossible task. There is not one agricultural product in any country, including ASEAN and China themselves, which does not benefit from some form of subsidies. The surveillance part is also not easy. Regarding tropical products, the EC has announced (20 October 1987) its offer for the liberalization (tariff and non-tariff cuts) of trade in certain tropical and semi-processed tropical products at the Fourth Meeting of GATT. The suggested orientation programme would definitely boost ASEAN exports to the EC. But, the United States and Japan have yet to respond to this.

Japan in particular is perceived to be foot-dragging in its liberalization efforts. The ASEAN perception, shared by China's experience, is that the ASEAN-Japan relationship is an asymmetrical one. In fact, there is increasing dependency on Japan's surplus capital and advanced technologies. Three issues will continue to be sources of friction in the economic relations between ASEAN and Japan, namely the ASEAN trade deficit with Japan, the increasing ASEAN debt burden because of the yen revaluation, and the inability to penetrate the Japanese market. Although the present trade tensions are well contained via the mechanism of bilateral dialogues and GSP negotiations, it is unlikely that Japan would be allowed to perpetuate an unequal partnership. Presently, the ASEAN-Japanese economic relation is still cordial and has yet to be disrupted by some of the explosive controversies which Japan has experienced with China, South Korea,

and Taiwan. In the triangular relationship between ASEAN, Japan, and China, any decontrol of the Japanese market and any improvement of the asymmetrical economic relationship arising from either ASEAN or China's efforts would ultimately benefit both parties. Similarly, the recent reduction of interest rates by Japan's Overseas Economic Co-operation Fund (OECF) to accommodate ASEAN's dissatisfaction would also assist China in her own request for reducing her yen-denominated debts. Japan, as guided by the Ohira Principles, would adopt an equilibrium posture between China and ASEAN.

While the above survey of major trade-related issues indicates that China and ASEAN have synergies in certain areas of international trade policy, there are also potential competition and conflict areas.

As China and ASEAN both continue to progress in their development drive, their search for export markets would bring them into the competition zones. China's exports, especially labour-intensive products, would become more competitive in terms of diversity and prices. Presently, there is "mild competition" in a small range of products. Estimates of competition in different export products in markets of industrial economies are shown in Appendix Tables A3.1 to A3.3. The number of competition areas presently is not large. Neither is the competition intense because there is still scope for sharing market niches. But the potential for intense competition exists as China succeeds in her modernization programme. Some ASEAN officials estimate that for some products this will occur during the next five years as the lobbying for access to markets of advanced economies intensifies. An example of this is the fall out between Thailand and the United States over a U.S.-subsidized sugar sale (12 August 1986) to China. The U.S. Commodity Credit Corporation (CCC) Sale of 145,850 tons of raw sugar to China at below world prices would depress sugar prices and thus affect a key export of Thailand, the fourth largest world sugar exporter. Incidentally, the U.S.-China sugar transaction was a direct sale which deviated from the normal practice of using a broker.

Another area of general competition is in securing investible funds. Both China and ASEAN countries are making aggressive drives for foreign investment. ASEAN in particular, after three years of severe recession, have made aggressive drives to woo foreign funds. As China improves her financial and monetary systems, she will become more attractive to foreign investors. Presently, her international credit standing is high, even higher than some of the ASEAN countries. In view of her appeal, there is some apprehension among some ASEAN quarters that China will take away a large slice of economic assistance from the advanced countries. In this context, the role of Japan is a delicate one. Both ASEAN and China expect Japan to play a pivotal role in helping them succeed in their economic development, especially since Japan has already benefited from the opening up of their consumer markets.

Since 1980 Japan has increased her economic assistance to China. But Japanese diplomacy ensures that ASEAN is not deprived because of this. Indeed her economic assistance to China and ASEAN is governed by the Ohira Principles (Three Principles of Economic Co-operation with China). A fine balance is thus struck so that none should feel aggrieved. With the latest announcement of the

New Aid Plan (Asian Industries Development Plan), it remains to be seen how Japan would allocate her surplus capital to these countries. On this, Japanese foreign diplomacy would be guided by the parameters of the emerging trade friction which was discussed earlier.

At the private sector level, the yen revaluation has changed the investment location of Japanese companies. ASEAN is ranked as high priority, particularly after the Mitsubishi Research Institute study which gave high ratings to Singapore and Thailand. Consequently, these two receive the bulk of the private Japanese funds now flowing to ASEAN. In comparison, China has not benefited from this. However, Hong Kong is being given a big injection of Japanese capital. China has a positive view of the new relocation of Japanese investment funds to ASEAN as economic success in these economies would have a strong multiplier impact on her, besides strengthening regional security and stability. A poor ASEAN is a source of power disequilibrium in this region.

Before the normalization phase, international trading relations between China and ASEAN had been conducted against a background of discordant political cum security positions. Although there were no open economic conflicts of any sort, there were occasional "soft" tensions which surfaced because of differences in ideological perceptions.

After normalization, an interesting aspect of the new economic relation is that, while many countries are deviating from traditional practices in international trade, ASEAN-China is still operating generally within the agreed rules of the game. Though major differences still exist between China and some of the ASEAN countries, the risk of arbitrariness in instituting unfair trade practices which are damaging to predictable trade and investment ties between countries is not used. This has thus not created trade diversion, defensive counter-actions, and consequent trade distortion. However, a cautious and wary diplomatic attitude governs the present economic relationship. In contrast, the ASEAN private sector has a more relaxed and even aggressive stance in penetrating the Chinese economy. Probably, the private sector would be the pace-setter for some ASEAN countries as far as China is concerned.

III. Policy Mechanisms and Institutions to Promote ASEAN-China Economic Relations

From 1985 a new phase of Sino-ASEAN economic relations emerged since the era of "normalization" in the 1970s. Earlier in the year, the Singapore Prime Minister had visited China and so too had a trade delegation from the Indonesian Chamber of Commerce and Industry (KADIN). And in November 1985, the Prime Minister of Malaysia visited China with a large delegation.

The first point to note about such visits is their focus on business and economic matters. Subsequent reciprocal visits from Chinese delegations also shared this commonality of interest. Second, of strategic planning significance is that invariably it is the political leadership (probably including the KADIN delega-

tion) which is required to initially spearhead trade and investment between the two countries.

This new phase of Sino-ASEAN relationship provides new learning curves for both groups of economies. The challenge is how both can participate in the opportunities which arise from dynamic changes and growth in each other's economic space. If this relationship is carefully nurtured it would lead to the maturing of Sino-ASEAN relations conducive to the creation of wealth in the Asia-Pacific area. On the other hand, if the focus is distorted by exaggerated fears of economic competition in their common strategy of export-led modernization, then an uneasy tension will prevail between China and Southeast Asian countries.

It may be a turning point that, after a decade of normalization of ASEAN-China relations, this new phase has emerged. Two aspects are noteworthy. First, the importance given to the development of relations with Beijing coincided with the recession phase in all the ASEAN economies. China, with its new economic reforms in the Dengist-Zhao style, presents challenging opportunities as a "non-traditional" trading partner for the ASEAN countries.

Second, this occurred in the context of a seemingly apparent convergence (since the late 1970s) between the two entities on the issue of Kampuchea. This convergence has been advantageous in so far as it contributes to the regional order wherein hegemony by any one state over others is rejected in the pursuit of inter-state relations, both political and economic. For the short-term this is salient since some ASEAN quarters suggest that China is a long-term security and economic threat to the region.

The new phase must therefore be seen as a sequel to the first phase of the opening up of China to ASEAN with the establishment of formal diplomatic relations in 1974 (with Malaysia) and 1975 (with the Philippines and Thailand). Some observers see the new phase as akin to the "opening up process" that China ushered in after the establishment of U.S. formal diplomatic relations with Beijing in 1979 and which had begun with the Nixon visit to China in 1972.

As explained earlier, ASEAN is basically a grouping of six equal and individual member states which have evolved different approaches in their China policy. There is as yet no official effort to establish a regional position towards Beijing. Consequently, the five ASEAN states have differential performance rates in their relations with China. But this is also due to Beijing's own differentiated policy towards ASEAN and its individual member states.

Arising from the different levels, rates, and styles of development between ASEAN and China, it is expected that this will impact on the approaches in their economic and business relations. Also, some of the individual economies within ASEAN are better prepared and strategically positioned to conduct economic relations with Beijing. Similarly, Beijing's market orientation towards ASEAN may not be as effective as it should be because of her different priorities in her national modernization.

At the same time, because of the less than congenial historical background in the ASEAN-China relationship, it is in practice impossible to separate economics from politics. However, despite this, it is possible to have economic exchanges between China and ASEAN countries regardless of formal political ties as with

Singapore; conversely, formal diplomatic relations do not necessarily mean strong economic links as is the case with Malaysia. For developments in China's economic relations with ASEAN countries see Chia and Cheng (1987).

We shall now review the development of various policy mechanisms and institutions for promoting a closer economic relationship between ASEAN and China at the country level.

1. China-Indonesia

On 23 July 1985, after eighteen years of suspension of diplomatic relationship, direct trade resumed between Indonesia and China. The Presidential Instruction (Inpres) No. 9/1985 was issued by the Indonesian Government and officially confirmed the negotiated agreement between the Indonesian Chamber of Commerce and Industry (KADIN) and the China Council for the Promotion of International Trade (CCPIT).

Because of diplomatic sensitivity, the Indonesian Government regarded the negotiations between KADIN and CCPIT as unofficial. KADIN is actually a non-governmental organization. To ensure that no undue expectation or misunderstanding would arise from this negotiation, even the signing of the Memorandum of Understanding (MOU) between KADIN and CCPIT on 5 July 1985 was arranged in a neutral country, Singapore. Furthermore, although the whole exercise had the support of both governments it was also agreed that both countries' names should not be incorporated in the agreement. All these suggest that the MOU should not be interpreted as a logical step towards the establishment of a diplomatic relationship. It appears that the mechanism to initiate direct trade must be appropriate to the dictates of political factors. This is an interesting illustration of political diplomacy and manoeuvring.

The MOU has formulated certain regulatory guidelines for direct trade to accommodate the absence of diplomatic ties. This covers (a) transaction payments; (b) visa application procedures; (c) berthing rights of vessels of the two countries; (d) communication services; (e) exchange of trade missions; and (f) basic protocol regarding the MOU.

The execution of direct trade by the Indonesian side, as laid down by the issuance of Inpres No. 9/1985, is based on the MOU provisions. The Inpres detailed guidelines on administrative procedures, scope of trade transactions, framework for policy-making, visa procedures, and the use of national carriers. By July 1985, direct trade resumed. Prior to this, during the period after 1967, China-Indonesia trade had to be effected via third countries.

It is too early to prejudge the outcome of this diplomatic move on trade expansion. One may predict that the change in the mechanism of trade, from indirect to direct, would have a positive impact on trade volume. But how fast and how far this can move depends on the institutional facilitators. Singapore, like Indonesia, has no diplomatic relations, but it has developed appropriate attitudes and effective channels for mutual trade expansion.

The resumption of direct trade between China and Indonesia should help to

resolve the differences over the role of intermediary trading countries like Singapore and Hong Kong. In practice, however, the role of these intermediaries cannot be totally eliminated for both economic and strategic reasons. As elaborated elsewhere in this study, they have economic functions. Besides, China will not just cut off traditional trading links just because of resumption of direct trade with Indonesia.

In resuming direct trade, the Indonesians have considered the impact from different angles, including issues of trade expansion with China to trade losses within Indonesia arising from competition. Such matters were expressed in public debate and finally to the Chinese side. During the visit to Indonesia in August 1985 of the CCPIT Chairman, Wang Yaoting, formal assurances were given that China would not disrupt the Indonesian economy by competing with domestic producers.

When a KADIN delegation visited China in August 1985 for the purpose of resuming direct trade, a number of letters of intent were signed for China to purchase Indonesian products worth US$353 million; this included manufactures and agricultural produce. Letters of intent are what they are; it remains to be seen whether this outburst of enthusiasm and high expectations immediately after the resumption of direct trade will achieve results. If not, one should anticipate a renewal of misunderstanding between the two countries.

The present position of bilateral relations is kept at arm's length. As far as Indonesia is concerned, China would not be given favourable treatment in the new economic relations. China, through the Chairman of CCPIT, did suggest the possibility of granting lower import duties on Indonesian goods. This has not yet been implemented.

Countertrade is now increasingly used in international trade. However, it is not easy to co-ordinate. The matching of needs requires that quantity, quality, and price must also be agreeable. There must also be organizations to facilitate this in each other's country. China is quite insistent on this form of trading since it economizes on the use of foreign exchange and helps to export its surplus products. Unfortunately, not all ASEAN countries find this feasible or always acceptable. In August 1985 a textiles team from China visited Indonesia to buy textile raw materials. But this was to be part of a counter-trade for Chinese cotton. When KADIN delegates visited Beijing in January 1986, a contract to buy cement, valued at US$13.5 million, was regarded to be part of a counter-trade for Chinese coal and cotton. The Indonesians view this as somewhat obstructionist. To the Chinese, counter-trade is part of the multi-forms of trading. The origin and final destination of the products is not important as long as China could promote trade with the country in mind.

In light of the above, the China-Indonesia bilateral economic relations can only be enhanced if the institutional structure is available and accessible for a fuller dialogue. In the case of trade, if no such mechanisms exist then the intermediary role of Hong Kong and Singapore will persist.

There are other hiccups which are not critical but annoying to better trade relationships. Some concern administrative procedures regarding trade inspection, which, if not solved, are inconveniences hindering speedier trade.

A seemingly innocuous issue like the physical inspection of goods could be distorted into a conflict situation for China and Indonesia. China did not agree to Indonesia's appointment of a Swiss private company, S.G.S., to inspect goods to be imported into Indonesia. A tripartite meeting in March 1986 involving the S.G.S. and the two countries' authorized surveyor corporations did not produce an acceptable solution. Since the inspection is now done in Hong Kong, China felt that this was not different from indirect trade and was upset over this.

Again, all the build-up in the goodwill to date was ruffled when the Chinese Communist Party (CCP) condemned Jakarta for the execution of three former PKI (Indonesian Communist Party) leaders. The official organ of the CCP in its 3 September 1987 edition condemned the execution. This was interpreted by some quarters in Indonesia to mean that China has not actually abandoned its support for the communist movement in Indonesia, or in Southeast Asia. This was taken quite seriously since Chinese delinking with local communist groups is definitely a precondition for the defreezing of diplomatic ties between the two countries. This incident points to the fragility of the trade relations.

The developing China-Indonesia economic relationship illustrates the use of various subtle policies, mechanisms, and institutions which indicate that a very cautious stance should be taken. For the long-term relationship, probably this may be the appropriate strategic game plan in view of extant, real or exaggerated, political sensitivities.

2. China-Malaysia

There are three broad periods in the China-Malaysia relations: the first period covers the late 1950s to the end of the 1960s; the second covers the 1970s; and the 1980s constitutes the present phase.

During the first phase direct trade was not significant. Actually a good percentage of the trade was conducted via third countries, particularly Hong Kong and Singapore. Meaningful direct trade between the two countries was only initiated during the 1970s. When he became Prime Minister of Malaysia in 1970, Tun Abdul Razak initiated the move to improve relations with China. In 1971, China supported Malaysia's concept of "Zone of Peace, Freedom, and Neutrality" in Southeast Asia.

Since the breakthrough, the number of delegations of industrialists and businessmen to China has increased. A growing number visits the Chinese Export Commodities Fair, held twice a year in Guangzhou. The number and volume of business contracts signed have also increased. With the establishment of diplomatic ties on 31 May 1974 a new phase of the China-Malaysia relations was initiated.

Since 1980 the firming up of economic relations is indicated by the increase in the number of mutual visits between high-level officials and also in the frequency of economic and trade delegations between the two countries.

The largest and most important official Malaysian delegation to China was led by the Malaysian Prime Minister Dr Datuk Seri Mahathir bin Mohammed

in November 1985. This visit, although its final effects are still unknown, confirms that a new phase of bilateral relations is beginning. A few formal agreements were signed. A major one was on the avoidance of double taxation and prevention of fiscal evasion with respect to income tax. Under this agreement, there will be no double taxation on business profits and investment income.

The CCPIT and the Council of the Malaysian Sino-Malay Joint Chambers of Commerce also agreed to co-operate to promote direct trade between the two countries. Another outcome of such trade missions was a memorandum of understanding between the Chinese Metallurgical Import and Export Corporation and the Malaysian Sabah Gas Industries. There was agreement that China would purchase hot pressed iron ingot from Malaysia during the following two years, 1986 and 1987.

In September 1987, a delegation led by the Deputy Prime Minister of Malaysia visited China. An outcome of this was the signing of two agreements related to air transport and shipping. The first would allow Malaysian Airline System to use chartered services to Canton and Beijing. The third and fourth freedoms would also be reviewed. The shipping agreement would allow the vessels of both countries to enjoy equal rights and opportunities in the carriage of cargoes between the two countries. It also meant that they would share cargo shipment as provided under the UNCTAD Convention in the ratio of 40:40:20. The agreement also encouraged ships of both countries to use each other's facilities.

Since normalization, between 1974 and 1984, the volume of trade between China and Malaysia has more than doubled. Chinese imports from Malaysia increased more than thirty times.

Although diplomatic relations are cordial, there are a few problems which are alleged to obstruct the further improvement of bilateral trade between China and Malaysia. The first concerns restrictions on the free flow of people between the two countries, but particularly by Malaysia. The Malaysian Government has regulated the movement and number of Malaysians visiting China. Certain criteria are used by the government to screen applicants for visas to China, namely age, character, and purpose of the trip. Three ministries are directly involved: the Ministry of Foreign Affairs, Ministry of Home Affairs, and Ministry of Trade and Industry. Some find this somewhat inconvenient. However, the Malaysian Government is reasonably liberal towards businessmen who visit the spring and autumn sessions of the Chinese Export Commodities Fair in Guangzhou. But the general feeling among Malaysian businessmen is that Malaysia has lost out to other countries because of bureaucratic regulations.

A contentious issue in Malaysia is the alleged bias that the Chinese Government shows towards Malaysian Chinese. There are also complaints that only this ethnic group is offered business opportunities and trade potential. Some attempts to rectify this have been made. At the official level, the Malaysian Government and quasi government officials have recommended changes in the traditional system of trading by involving more indigenous businessmen. At the practical level, the Chinese find it difficult to cut off the trade links between China and the Malaysian Chinese businessmen as they were set up at least a generation ago. To effect some changes, the Malaysian Government encouraged the Chinese

and Malay Chambers of Commerce to set up the Joint Chamber of Commerce. The objective is to promote collaboration among different ethnic groups, but particularly the Malaysian Chinese and Malays, to penetrate the Chinese market. There are also possibilities that some of the present functions of PERNAS (Malaysian trading company) could be taken over by this Joint Chamber. Since its formation, however, the Joint Chamber has not achieved any significant impact on the China-Malaysia economic relations.

Somewhat related to this is the question of direct trade. Although diplomatic relations have been resumed since 1974, the Malaysian Government alleges that the Chinese Government has not made a strong effort to cut off intermediaries, particularly Singapore and Hong Kong. This is taken to mean that the Chinese Government favours the ethnic Chinese in these countries. The counter argument is that it is the economics and efficiency of trade practices that have created this indirect trade structure. This indirect trade had been built up over time, especially when only Singapore and Hong Kong continued to maintain ties with China. The Bank of China, for instance, was never closed in Singapore as in Malaysia, and provided an important function for remittances and trade with China for the Overseas Chinese. When this issue was raised in private discussions, the Chinese Embassy officials repeatedly pointed out that China desired direct trade, but they could not stop intermediaries from participating in a lucrative business. A stalemate situation remains.

Regarding the role of PERNAS in regulating economic and trade relations with China, the general view of the Chinese is that it is a discriminatory practice aimed only at the Chinese export trade. Malaysia does not impose the 0.5 per cent procedural fee on other countries although import licences are also required for imports of certain restricted items from all countries. The Malaysian Government response is that PERNAS' role is for "orderly" trade. It is pointed out that the reason why China and Malaysia have so far not signed a trade agreement is because of the interventionist position of PERNAS. But, the Malaysian Government does not seem to have the urgency to change this, in spite of numerous complaints from the Malaysian Chinese guilds and associations.

The ubiquitous question of balance of trade is also raised off and on by the Malaysian Government. In recent years this has become worse because China has reduced imports of Malaysian primary commodities. But the central cause of the imbalance is really the narrow trade pattern and non-complementary production structure of the two economies. At the same time, the absence of an urgency to search for new export items, besides the usual primary commodities, has therefore perpetuated the existing trade problem.

The Malaysian private sector, however, feels that there are prospects for increasing trade and investment in the two economies. China does provide an export market opportunity for Malaysian businesses. For instance, China is an important buyer of Malaysia's natural rubber and palm oil products. Forty per cent of China's natural rubber imports are from Malaysia.

Exports of crude natural rubber to China are expected to increase further. The projected higher utilization of crude natural rubber from Malaysia is due

to the following factors: (a) only the Hainan Island of China produces natural rubber, but the supply is inadequate to meet the demand; and (b) with the rapid industrialization in China, demand for raw materials will increase. Correspondingly, the demand for crude natural rubber will increase with the development of the rubber-based industries.

The other exports which the Malaysian Government wants to promote actively in China are palm oil and its related products. So far, they are not selling very well in the Chinese market because of a number of factors. Firstly, there is stiff competition from soya bean oil and animal fats of which China has an abundant supply. Secondly, palm oil is mostly imported for industrial consumption in the production of soaps, detergents, and lubricants. Thirdly, the Hainan Island of China is also developing its palm oil industry. Lastly, there is inadequate promotion of the products in China. But, the Malaysian Government is hopeful that some co-operation on this can be worked out.

From the Chinese side, there is a keen interest to supply fuel and rice to Malaysia. China can supply the cement factories and thermal power stations in Malaysia with coal. They are also keen to resume the export of Chinese rice to Malaysia. However, as far as the latter is concerned, this may be viewed from the national security angle. Malaysia would most probably prefer more diversified sources of imports.

A successful export item to China is cocoa products. Between 1982 and 1983, exports of cocoa beans to China registered an increase of about twenty-nine times. This was mainly attributed to the promotional efforts of the Malaysian trade mission to China in 1983. It is anticipated that the export of cocoa beans to China will rise with the expected increase in the manufacturing of confectionery and biscuits in that country.

However, the extent to which one can be successful in doing export trade with China depends on two vital factors: on the one hand, the need for Malaysian products to be competitive both in terms of price and quality, and on the other, the transient nature of China's demand for specific goods. Malaysian businessmen are aware that China's demand for imports is guided by its ability to export and the rate with which the self-reliance policy is being pursued by the Chinese.

At present, Malaysia's large supply of natural resources provides the base for the further exploration of trading opportunities with China. It is to Malaysia's interest to concentrate on a few sectors which have significant relative cost advantage, particularly, primary commodities and resource-based products.

The general private sector view is that Malaysia should take advantage of the re-emergence of China in the international market because China's need to import more raw materials to facilitate its industrial development will increase further.

In spite of the eagerness of the Malaysian private sector to have a closer economic relationship with China, the Malaysian Government posture is somewhat less enthusiastic. Consequently, the policy measures and organizational system for promoting trade and investment with China are only just basic. As an aside, it is noteworthy that, among the ASEAN countries, only Malaysia and Indonesia have historically attached weight to their domestic ethnic Chinese parameter in their policy formation with regard to relations with China.

3. China-Philippines

In comparison to the other ASEAN countries' ties with China, the development of the Philippine economic and trade relations with China is a mere record of trade agreements and mundane trade. It lacks the drama of the China-Indonesia history of relationship and has little of the aggressive drive of the Singapore strategy towards China. The content of the relations is therefore less substantive.

Since China became a communist country, and during the Cold War period, the Philippines had been under the strong influence of the foreign policy of the United States. It was anti-communist. Trade with China was embargoed. Finally in 1975 the Philippines and China resumed official diplomatic relations. But in 1971, the Philippine Chamber of Commerce had already succeeded in initiating trade with China. This involved an exchange of Philippine coconut oil for Chinese rice. Like Singapore and Indonesia, but of a much smaller magnitude, trade preceded the resumption of political relations.

Unlike Malaysia's relations with China, the setting up of relations between China and the Philippines was also accompanied by a trade agreement. This treaty set the tone and framework for economic and trade relations. The relevant details pertain to the following:

a. both countries to exchange most favoured nation treatment with respect to reciprocal trade taxes;
b. both to promote long-term development in trade expansion;
c. both agree to use amicable consultations to resolve trade disputes; and
d. both to review other strategies to further improve economic and trade relations and the implementation of the trade agreement.

The trade agreement also incorporates options to set up a joint trade committee. In April 1976, the Philippine-China Joint Trade Committee was thus established. Its principal job was to administer the implementation of the trade agreement. The agenda of the Committee's first meeting in June 1977 in Peking included an agreement with regard to the type and quantum of various trade products to be exchanged.

To further strengthen mutual trade, both countries signed a long-term trade agreement in July 1979 for the period 1979–85. The target for the total value of import and export trade to be achieved during this period was set at US$2 billion. The Chinese agreed to export 8 million metric tons of crude oil and some amount of refined petroleum products. She would also give priority to supply the Philippines additional amount of crude oil and refined petroleum products if required. In return, the Philippines would export to China 1 million metric tons of raw sugar; copper concentrates and coconut oil would also be exported to China. On 30 January 1986 another trade protocol was signed. It specified an exchange of products of about US$180 million each way to be transacted.

As part of the process of creating institutional infrastructure for trade expansion, the Philippine Government set up the Philippine International Trade Corporation (PITC) under Presidential Decree No. 252. The PITC is directed to monitor the effective implementation of Philippine trade with centrally planned

economies. It is also assigned the task of acting on behalf of the Philippine private sector to implement the details of the trade agreement.

The above infrastructural groundwork and framework of guidelines are not only pertinent but are prerequisites for promoting effective direct trade. For the China-Philippines economic relations this is more than necessary since the extent and depth of their relationship are somewhat peripheral to each other. Thus, if the economic and trade relations of the other ASEAN countries with China are "underdeveloped", that of the Philippines with China is "undeveloped". It also suffers from the disadvantage of not having a tradition of other non-economic linkages. This may turn out to be a political advantage since minimal conflict areas are present. Indeed the expansion of trade between the two countries has been due more to politics as a facilitator than to economics as the source of trade growth.

The Philippines shares many of the ASEAN problems in its bilateral economic and trade relations with China. This concerns the lack of a diversified export capacity, trade imbalance, weak trade mechanisms, and overall export competitiveness. But, it has one edge over Malaysia and Indonesia; the Philippines is not bogged down by the polemics of the politics of trade related to ideological and ethnic factors. On the other hand, unfortunately, it is shackled by critical domestic security and political problems. Given this, it is not expected that there would be any marginal changes in policies or relationship towards China in the immediate future. The priority on this matter is very low.

4. China-Singapore

Singapore Prime Minster Lee Kuan Yew visited China in 1976, 1980, and again in September 1986. And in October 1986, China's Vice-Premier Tian Jiyun visited Singapore. Although, there is as yet no diplomatic relationship, which in reality is a mere formality, between the two countries, Singapore has in fact the most intense relationship at the government and people's levels with China among the ASEAN countries. Such exchanges are now routine events. This is partly due to historical, cultural, and ethnic reasons, and also partly due to the strategic game plan of the Singapore leaders who have cut out a vital niche in China for Singapore. Only Singapore has forged links with China in a multilayered manner, from the appointment of Dr Goh Keng Swee, the former Deputy Prime Minister of Singapore, as economic adviser to the coastal cities to the proposed use of Chinese workers in Singapore.

There is no doubt that a critical reason for the successful relationship is due to the mutual respect between the leaders of the two countries. In Asia, the personal touch and the chemistry of personality of leaders are very real and relevant to the success of government-to-government relations. Thus when Chinese Premier Zhao Ziyang visited Singapore in 1981, he was all praise for the success of Singapore and its leadership. Singapore Prime Minister Lee Kuan Yew's visits to China were all diplomatic triumphs. Gestures like this no doubt

show that Singapore and Chinese leaders have a warmer relationship which is missing in the relationship of the other ASEAN leaders with China. But at the operational level, it is the effective follow-up of the Singaporeans, both the bureaucracy and entrepreneurs, which explains the success of the Singapore-China commercial tie-up.

In terms of the intensity and frequency of contacts, Singapore is well ahead of the rest of the other ASEAN countries. At both the Central and Provincial levels, Singapore has received and sent out more delegations in one year than what the other ASEAN countries have achieved during the last ten years. Some of the largest trade exhibitions have been held in Singapore.

This competitive edge of Singapore is due to its more relaxed policy towards China, at least as far as trade and business are concerned. For instance, Singaporeans could travel by Singapore Airlines directly into and out of China for business purposes without a visa hitch or other forms of regulatory or bureaucratic control as are experienced in the other ASEAN countries. In 1982, 18,000 Singaporeans visited China. This increased to more than 50,000 in 1985. This facilitates and expedites commercial transactions. This was reciprocated by Chinese official delegations to Singapore which were predominantly for business and industrial co-operation purposes.

There is no doubt that the foresight of the Singapore Government in urging Singaporeans to master Mandarin has given it an advantage. Thus, because of Mandarin, Visa Card, the large American credit card company, has bypassed even Hong Kong and has chosen Singapore as the training centre for its strategic attack on the China market, which grew from US$3 million in 1983 to US$90 million in 1985. For the same reason, Australian companies have also started to use Singaporeans and Singapore companies to penetrate the China market. Language and culture have become a winning edge in international business competition. This is the new "infrastructure" which is being promoted in Singapore to transform it into a competitive centre for trade and finance. China is throwing out more lines to the world, and it regards Singapore as a major junction it can use.

The transfer of technology from Singapore is a vital contribution to the modernization of China. This is in the form of hardware and service technology, which are transmitted both directly and indirectly. Singapore may not be in a position to export high-level technology, but it acts as conduit for transferring technology from the more advanced countries like the United States. In many cases, the direct transfer of technology from the industrial economies to China is constrained by domestic regulations. However, this can be overcome when subsidiaries of multinational corporations (MNCs) in Singapore are the source of the transfer.

A major complementary role of Singapore to China is in the services sector which in fact has been enhanced quite rapidly in recent years. This includes the transfer of services technology, and other new learning curves for the Chinese, namely management culture, corporate leadership, and work ethic. This is achieved by the training of Chinese technocrats and bureaucrats in Singapore

and in China itself. Technology transfer also occurs in embodied form, particularly via the use of Singaporean expertise in joint-venture projects in China. One major project, for instance, is the management of airports in China by Singaporeans. A direct request to manage the US$300 million Hongqiao airport from Mr Lu Guoxian, Shanghai's deputy director of Foreign Economic Relations and Trade Commission, to the Civil Aviation Authority of Singapore (CAAS) was made in July 1986. This is in recognition of the high level of management expertise that Singapore has achieved, as manifested by Changi Airport and transforming Singapore into a "convention city".

New services like insurance, franchises, and stockbroking are also being transferred via Singapore. During the visit of Lee Kuan Yew in China, there was consensus reached regarding the use of Singapore-dollar loans to China for the purchase of Singapore goods services. This financial agreement is pathbreaking in a way since the Singapore Government's policy is not to encourage the Singapore dollar to become an international currency.

The growing presence of Singaporean workers and technocrats in China is not only a new phenomenon but it is one which is part of the technology transfer process. Incidentally, among the ASEAN countries, only the Singaporeans have this opportunity to work in China. This may help to foster closer personal and commercial ties, reinforcing the advantage that Singapore has over the other ASEAN countries.

Its role as the regional shipping centre of Southeast Asia has also assisted Singapore in getting jobs from China. Keppel Shipyard, one of the biggest ship-repairers in the region, has completed a US$9-million conversion of a Chinese supertanker.

There is no doubt that the Chinese delegations are more than impressed by the conspicuous success and progress of Singapore's economy. Chinese delegates are impressed by the housing schemes, the Singapore port, the financial networks, the telecommunications system, the Mass Rapid Transport system being developed, and other functions of the capitalist economy which purr efficiently.

The closer economic relationship between the two countries is also manifested by the offer of Chinese construction workers to Singapore. The Tianjin Construction Engineering Corporation wants to "export" 10,000 of its total 60,000 workers. They are willing to work in Singapore at competitive international wage rates. If Singaporean construction companies start to use such Chinese workers, this may displace the traditional labour supply from Malaysia, India, and Sri Lanka. On this matter, the Singapore Government will take a cautious position.

There are still some operational problems in the China-Singapore economic relations despite their steady growth. The first concerns the diversification of the trade structure. The present position is a reversal of the situation of the 1960s and 1970s when Chinese exports to Singapore were more varied, and rubber was the single main Singapore export item to China. Now Singapore's exports to China are more diversified than China's exports to Singapore.

Secondly, China's expectations of Singapore are much higher than other ASEAN countries. Because of its higher level of economic achievements and technological developments, China expects and prefers Singapore's investments

to be in the high value added and sophisticated technology areas, rather than in traditional sectors. After the first phase of saturation is over in such sectors, the options and opportunities can only be in the more sophisticated industries in which China needs outside assistance.

During the 1985 visit of Lee Kuan Yew to China, the MOFERT minister, Zheng Tuobing, had assured Singapore that China intends to direct a significant part of her trade to Singapore. It was targeted to be doubled within five years. This assurance is heartening to Singapore and disturbing to her ASEAN neighbours. To the former it means strengthening of the trade role of Singapore; to the latter it means that the intermediary status of Singapore with respect to the China trade will not diminish. At the regional ASEAN level, Malaysia and Indonesia have been trying to upgrade their direct trade links with all their trading partners. The entrepôt role of Singapore has not been accepted as an economic function but as somewhat detrimental to the national economic interests of these countries.

It will not be easily appreciated that the underlying conditions of the dynamics of international trade have already changed during the last two decades. Comparative advantages are not due to factor endowments as explained by Ricardo and Hecksher-Ohlin; they can be created because of technological externalities and information networking. This is the type of new infrastructure that high-growth newly industrializing economies like Singapore and the advanced countries are creating to be ahead of the rest of the Third World. The traditional argument against the "middleman's" role is therefore both obsolete and incongruous in the light of changes in the structure of international trade.

Indeed, with the integration of the role of MNCs, many of which are essentially giant manufacturers cum sogoshoshas, in the economy of most countries, the function of global trade and the style of the business of trading has already changed fundamentally. Every country is now a potential middleman's economy. Singapore is now the middleman for financial trading and information networking; a dramatic change from its traditional entrepôt function. In fact, Singapore is also now the conduit for transfer of technology of MNCs to China, especially after the lifting of certain restrictions on trade with China by the Paris-based Co-ordinating Committee for Export Control (COCOM). This new role is an area of interest to China. Possibly some aspects of Shenzhen, Hainan Island, or Shanghai can be modelled after Singapore.

For the other ASEAN countries, a useful lesson to learn from the Singapore experience is the importance of back-up support by the political leadership, bureaucracy, and other vital services to ensure a high success rate in any venture in China. For instance, a reason for the relative success in some of the Singapore's medium-sized companies in China is due to the support of the Market Development Assistance Scheme (MDAS). For instance, Matsushita Greatwall, a medium-sized manufacturer of mattresses, was able to get a foothold in the Chinese market because of the technical and financial assistance from MDAS. In contrast, such support is not forthcoming to the private sector in the other ASEAN countries.

The China-Singapore relationship is exemplary of how two countries learn to

exploit each other's synergies for mutual benefits. In particular, it reflects the successful use of a range of policy instruments, institutions, and mechanisms which are specifically structured to meet the challenges of a system which is quite different from the one Singapore normally deals with. So far, its success is the envy of other ASEAN countries.

5. China-Thailand

After the establishment of the People's Republic of China, although there was no diplomatic relations, bilateral trade had already started at the non-government level. However, in January 1959, the Thai Government under "Decree No. 52 of the Revolutionary League" banned all imports from China. Only some re-exported goods from Hong Kong and Singapore reached Thailand.

In December 1974, the Thai Government annulled the 1959 decree. Non-government trade became important again and was instrumental in resuming diplomatic relations which occurred in July 1975. A new phase of economic and commercial relations between the two countries had begun. Trade subsequently developed rapidly as the mechanism was now available.

Ahead of some other ASEAN members, Thailand signed a trade agreement with China in 1978. The general stipulation of the agreement stressed the importance of trade expansion based on mutual advantages and equality of status. The good relationship between the two countries culminated in the visit of Chinese Vice-Premier Deng Xiaoping to Thailand in 1978. This resulted in the two governments signing an agreement for establishing a joint committee for trade and a protocol on import and export commodities between the two countries.

From 1979, the yearly protocol of import and export commodities became the format of trade between the two countries. The joint committee for trade meets annually, alternating between the capitals of the two countries, for the purpose of monitoring all trade matters. Although this approach towards trade is somewhat rigid, satisfactory results have been achieved. In general the specified commodities of the protocols were transacted. Occasionally some deviations occurred because of contingency requirements. Thus the protocol for 1984 itemized an import of 100,000 tons of rice from Thailand for China. But out of political goodwill, China, as requested by Thailand, purchased 190,000 tons of Thai rice.

From 1985, the protocol incorporated more details and also included quotas for the value of trade. The China-Thai experience shows that although such protocols are inflexible, they do contribute to orderly trade.

Besides Singaporeans, Thai entrepreneurs have been quite assertive in seeking market opportunities in China. During 1981–84, 15 investment agreements valued at US$26 million was signed with Thai investors. During 1985, another 7 agreements valued at US$9 million were signed. The number of direct Thai investment agreements with China has totalled 25 to date. In contrast to

Singaporean investments which are more diverse and in the sophisticated technology areas, Thai investments are in consumer durables, light machinery products, and construction. This reflects the lower technology level of the Thai economy and its limited capacity to export technology to China.

The mechanism of the investment is joint-ventures which are set up as limited liability companies. Most of these joint-ventures are meant to exist for not more than twenty-five years. The equity participation is not fixed and is negotiable. There is joint management. Most of the Thai companies do not have more than 50 per cent of the equity. Profits are shared according to equity ownership. In some joint-ventures the Chinese provide the equity in the form of land, resources, and labour; the Thai provide the machinery and technology. All details and obligations of joint-ventures are incorporated in documentation under the Chinese legal structure. Because of the nascent stage of the formation of foreign investment policy in China, the Chinese have chosen a case by case approach in structuring joint-ventures. The Thai investors have found this quite unsettling since the investors are uncertain about what to expect. Despite this, Thai investment in China is expected to increase.

There were about 22 Chinese joint-ventures implemented in Thailand in 1986. Another 12 are being negotiated. China concentrates on resource-based and light industries, including timber processing, coal mining, and farm machinery. China's contributions include machinery and low-level technology. Besides the congenial environment in Singapore, China finds the Thai attitude accommodating, the economic programme attractive, and the foreign investment incentives competitive. For China, which is not permitted to invest in Malaysia or Indonesia, the rich resource economy of Thailand is an inevitable alternative option. In a way, the incremental gain in investment in these primary sectors that China is investing in represents the opportunity cost to Malaysia and Indonesia because of their unwillingness to accept Chinese investment.

As elsewhere, the promotion of China's investment in Thailand is determined by political and economic goodwill rather than by total commercial rationale. This is reasonably acceptable to the Thais who find the investment injection timely given the economic recession. A major departure from the other ASEAN countries is the willingness of the Thai Government to allow Chinese labour to be used inside Thailand. Like South Korean construction companies which have been exporting their surplus labour abroad, the Chinese have also undertaken contracted work, especially in construction, in Thailand. Besides commercial and investment projects, the Chinese and Thai Governments have also promoted collaboration in educational, cultural, and technical projects.

The China-Thailand economic relation is constrained by several limitations. First, they are economies which are pitched at the same level of development. The degree of complementarity is quite low. But, the biggest constraint is the limited capability of the Thai economy to expand her export capacity in the medium term. Both countries share a similar export trade structure, importing technology and other intermediate goods from the developed nations and exporting low level technology items and primary commodities. Consequently,

the bilateral exchange is restricted. Given this similarity of economic structures the inevitability of trade imbalance and bilateral trade instability will arise if the needs of one party fluctuates. For instance, in 1980 petroleum exports to Thailand constituted 60 per cent of China's total trade with Thailand. But in 1981 Thailand cut the imports significantly. China, on her part, has surpluses in a wide range of agricultural produce that Thailand exports, like rice. There is therefore little absorptive capacity.

To promote trade expansion, in 1985 trade protocols between the two countries were signed. These specified the quantity and the value of commodities in their bilateral trade. As always, enthusiasm and reality need not match. What may happen is that the initial purchases by China of Thai products, especially agricultural items, because of political goodwill and not needs will become a trade issue that strains the bilateral relations. For instance, China has to re-export (for example, mung beans) a certain portion of what she imports from Thailand as the former does not really require the goods. Besides not being an effective way to promote long-term trade, this may have short-term adverse repercussions on the political relations. Thailand may misunderstand China's effort although this is done to have a more bilateral trade balance.

Related to the above is the exaggerated role of trade balance or imbalance in the trading position of countries. Many governments have viewed a bilateral trade imbalance with unnecessary alarm. More often than not this is politicized to affect the foreign relations of countries. On this matter, the China-Thailand situation shows that since 1974 Thailand has had an unfavourable trade balance for most years. This trade imbalance becomes acute when the foreign reserves are running low. Unfortunately, the options for improving this are severely limited by both countries' capabilities. Depending on the size of the imbalance and whether or not other compensating opportunities are made available by China, Thailand would raise this issue for trade negotiation in the future.

A business question which remains is the unfamiliarity of Chinese consumers and users with Thai products. Ignorance about the competitive price and quality of particular commodities from Thailand hinders exports to China. The Chinese have expressed concern regarding unrealistic pricing of Thai goods which are out of alignment with world pricing. Some Thai commodities are below international standards. The case of Thai corn which has a high alfatoxin content was cited. More often than not, however, the problem is that Thailand cannot provide what China really needs.

On the question of project investment, it is noticeable that the scope for this is not fully exploited. Mutual frustrations arise because of the high expectations that investments should be in those areas that can promote the long-term socio-economic development of both countries. This is a problem of matching each other's strategic needs.

What is interesting about the China-Thailand experience is the rapid development and use of a wide variety of instruments to promote business and commerce between the two countries. Moreover, Thailand is also taking an increasingly more assertive approach in maximizing business opportunities and economic options with China.

IV. Conclusion

In this paper we have reviewed the implications of various policy changes and institutional developments which individual ASEAN countries have evolved in response to challenges at the global level and in reaction to the new phase of bilateral ASEAN-China relationships. It is clear that each ASEAN country has developed its own structure of economic relationship with China. Among the major factors which influence this are the dictates of domestic political realities and perception of regional geopolitics. Consequently, each one moves at a different pace. But all are converging toward a closer economic relationship with China as more facets of policy instruments and institutional mechanisms develop and mature.

How the future scenarios for the China-ASEAN economic relations for the next decade will evolve is not easy to predict. Quite apart from the positive influence of policy changes and institutional infrastructure improvements, there are also other significant parameters which determine the probable outcomes for China-ASEAN economic relations in the future. They include the following:

1. The principal one is that the political and security scenario in Southeast Asia remains at the present stable level. Any probability towards a solution of the Kampuchea question is a plus factor for trade and investment. As for Indonesia and China, if diplomatic relations are normalized the trade quantum will accelerate somewhat. The question remains as to whether it is economic imperatives or political ideology that both wish to give priority to. It seems both can wait.
2. Another parameter is that China will continue to accommodate to remove ideological and political differences between her and the ASEAN countries. In particular, the issue of moral support for communist groups in ASEAN must be resolved. This will enhance the comfort level for closer economic ties.
3. The ASEAN countries will recover from economic recession and be able to sustain a growth rate of an average of 5 to 6 per cent annually throughout the 1980s. China is expected to have an annual growth rate of at least 8 per cent. Both are positive factors for trade and investment as they create economic capacities and options.
4. Both the ASEAN countries and China will succeed in restructuring their economies and thereby create increasing economic complementarities.
5. Both parties, but particularly China, continue to consider trade as an important strategy for national economic development. For this, and not inward-looking policies, would accelerate bilateral economic relationships.
6. The last parameter is that the ASEAN governments will promote the role of the private sector in their economic relations with China. The private initiatives in ASEAN could then complement the initial efforts of the government.

In view of the above, the medium-term scenarios will be:

(1) Singapore will continue to complement China, supporting her in high value and medium-to-high technology services. She will continue to act as a junction for China's export and import trade. Among the ASEAN countries, Singapore's economic inter-dependency with China will be intensified in the future. Her competitive edge *vis-à-vis* the other ASEAN countries will be further reinforced.

Singapore's exports to China is expected to increase by at least 15 per cent annually, and imports by 10 per cent. This is easily explained by the fact that the Singapore Government is already implementing, way ahead of the other ASEAN governments, its strategic plan to revive the Singapore economy. Intensifying trade and investment with China is one of the priority strategic options. For this reason, the Singapore Government has not only liberalized all controls governing commercial relations with China for Singaporeans, but also actively promotes their participation.

(2) The other ASEAN countries will continue to specialize in the resource-processing and labour-saving type of industries. The small- and medium-scale industries and labour-intensive export industries will become more important because of the present change in economic policies to revive these economies. However, because of competitiveness between China and ASEAN this may not lead to a significant increase in trade between them.

(3) The balance of trade will improve when the trade composition is more diversified. But this is not likely to occur during the next five years. Dependency on primary exports to China will still predominate the trade structure in the medium term. One should anticipate frustration among the ASEAN countries which are primary producers when China cannot absorb their primary exports. The Chinese demand elasticity for such products is low, but the ASEAN members are building up expectations that China has a market for these goods. One of these is palm oil products.

(4) There will be changes in the energy trade. The decline in oil prices is expected to persist in the medium term. China will therefore become less important as an oil supplier to some of the ASEAN countries like the Philippines and Thailand. However, because of political goodwill the lifeline is available, if needed. China's sales of petroleum products to ASEAN, especially Singapore, will increase. The energy trade will witness the growing importance of Chinese coal exports to the region.

(5) If the rhythm of China's modernization programme remains, we should expect an increase in export of a wide range of light manufactured and intermediate goods to ASEAN. Since the latest economic policy of some of the ASEAN countries stress the role of small- and medium-scale industrial development, there is scope for the exports of China's light industry and machinery products. China can promote this by having a liberal credit or soft loan scheme to support the export of these products. How much this will be achieved depends on the protectionist policy of the ASEAN countries and on whether these Chinese intermediate goods are price and quality competitive to have some substitution effects. The obstacle is that China

cannot or will be restricted by ASEAN domestic politics from providing strong technology and manpower support as part of the after-sale service. Also some ASEAN governments may discourage this, viewing this policy as a threat to their own industrialization efforts. They are also cautious about being overdependent on China.

(6) Although in the short run the competition for third country markets between China and ASEAN is not expected to be problematic to the cordial relations, the urgency to seek out market niches because of the present economic recession will inevitably intensify competition in the medium term. In particular, the fight for the shrinking and protected markets for labour-intensive and other export substitution products in the American and Japanese markets is inevitable. Among the ASEAN members themselves this has already happened. The probable scenario is that China, because of her low real wage, can displace a significant portion of the existing markets of the ASEAN exporters. It remains to be seen whether China uses long-term political strategizing or pure commercial imperatives to influence her export position which overlaps that of ASEAN.

(7) A longer-term outcome of the above is that the ASEAN countries, following the models of Singapore and Taiwan, must upgrade themselves to medium-technology-based industries and other higher value added products in which China has presently less competitive advantages. In light of the competitive experiences of the 1960s and 1970s among the newly industrializing economies (NIEs), it is critical that the ASEAN countries should accelerate the drive towards sophisticated areas of manufacturing. The next fifteen years will be a more competitive era.

(8) Considering the above, the overall catching-up by China, which exerts tremendous pressure on ASEAN and the other NIEs, will also add urgency to Japan's industrial reorganization. In addition, the foreign trade policy of Japan must also be restructured to suit its own national aspirations and that of the growing economic power of China and ASEAN. Japan's latest investment move to get behind the protectionist barriers of the United States and EC countries serves its strategic interests. But, any severe diversion of capital investment away from ASEAN and China will lead to political reactions. During the medium term, the yen appreciation has a favourable effect on China and ASEAN as it leads to a shift in investment locations. Japanese investment is now increasing in Singapore and Thailand because of favourable cost-effectiveness and high return on investment.

(9) The triangular economic relationship among Japan, China, and ASEAN is now poised for a potential improvement if Japan exploits the comparative cost advantage of the yen appreciation to invest in China and ASEAN, and also to amplify the export volume of ASEAN and Chinese exports to a more liberalized domestic market. As far as manufactured exports is concerned, the burden is on China and ASEAN to develop their export and marketing capacity to cope with the challenges of the Japanese market. So far, except for primary products, this has not met with great success.

For primary products, Japan in fact could now buy more raw materials from ASEAN for reprocessing for the China market.

(10) Despite the disenchantments with the inefficient economic institutions of China and the high investment risks, foreign investors cannot ignore the Chinese potential. The outcome depends on how fast China continues to modernize itself and how it packages its incentives for foreign investors. But the competition for scarce investible funds between China and ASEAN is real. In the short run this is a zero-sum game. Any loss of investment by one country among the ASEAN group or China is an incremental gain for another country.

Another dimension of capital flow from ASEAN to China concerns the type of investment projects. There is a noticeable concentration on infrastructure construction, tourism-related business, and medium-technology manufacturing. While the much touted investment potential is always discussed, the actual range of investment is narrow. The problem is the lack of financial capacity and technological capability on the part of ASEAN investors to compete with their Western counterparts in the large-scale projects. Singapore is presently the only ASEAN country that has marginally more to offer China than the other ASEAN members.

(11) Above all, China and ASEAN will continue to learn to adjust to each other as they conduct trade and business based on economic factors. The peculiarities of various policy controls and mechanisms would be "normalized" in due course as the adjustment and accommodation progress.

APPENDIX TABLE A3.1
Estimates of Market Share of Chinese and ASEAN Products in the EEC Market, 1985
(In percentage)

Commodity	China	Indonesia	Philippines	Thailand
Vegetables	5.0	—	—	14.3
Spices	1.6	13.7	—	—
Castor oil	10.5	—	—	7.2
Bed feather (down)	20.0	—	—	1.5
Goat skin	28.8	1.9	—	—
Tungsten ore	24.8	—	—	7.0
Table linen	14.5	—	1.0	—

NOTE: The above statistics are revisions of M. Ebashi's initial estimates (see M. Ebashi, "Role of China in the Economic Interdependence of ASEAN and the Pacific", Proceedings of Expert Group on ASEAN and Pacific Economic Co-operation, Bangkok, June 1982). They are based on information given by ESCAP, various ASEAN ministries, and Chinese officials' estimates.

APPENDIX TABLE A3.2
Estimates of Market Share of Chinese and ASEAN Products in the Japanese Market, 1985
(In percentage)

Commodity	China	Indonesia	Malaysia	Philippines	Singapore	Thailand
Fowls	16.7	—	—	—	—	32.6
Shrimps	13.0	22.0	—	—	—	—
Prepared fish and shellfish	16.2	—	—	—	—	15.4
Fruits	7.5	—	—	28.3	—	—
Prepared fruits	10.7	—	—	7.5	—	—
Beans	17.5	—	—	—	—	25.7
Hemp	36.3	—	—	19.0	—	—
Ramie	31.2	—	—	27.2	—	—
Castor oil seeds	33.2	—	—	58.3	—	—
Castor oil	5.6	—	—	—	—	71.7
Lumber of broad—leaved tree	4.3	16.5	—	27.4	—	—
Raw material for perfumery, pharmacy	52.8	—	—	—	—	3.9
Petroleum crude	3.9	15.3	—	—	—	—
Petroleum products	6.0	16.0	—	—	21.4	—
Petroleum spirits	7.6	—	—	—	22.6	—
Kerosene	12.0	—	—	—	61.3	—
Synthetic fibres, fabrics	7.2	—	—	—	—	7.6
Packing sacks and bags	29.3	—	—	—	—	48.9
Articles of bedding	49.2	—	—	—	12.2	—

APPENDIX TABLE A3.2 (*Continued*)

Commodity	China	Indonesia	Malaysia	Philippines	Singapore	Thailand
Rice	4.1	—	—	—	—	85.4
Spices	15.3	—	16.5	—	—	2.4
Flourspar	39.5	—	—	—	—	24.0
Secondary fibre goods, not clothes	27.8	—	—	—	—	4.0
Clothing	15.7	—	—	1.2	—	—
Trimming for garments	16.0	—	—	4.4	—	—
Furniture	8.1	—	—	—	—	4.2
Tea	21.3	—	—	—	9.6	—
Wheat bran	3.5	58.7	—	—	—	—

NOTE: Same as for Appendix Table A3.1.

APPENDIX TABLE A3.3
Estimates of Market Share of Chinese and ASEAN Products in the U.S. Market, 1985
(In percentage)

Commodity	China	Hong Kong	Indonesia	Malaysia	Philippines	Singapore	Thailand
Men's cotton shirts	4.5	38.1	—	—	—	5.2	—
Men's cotton trousers, slacks, and shorts	9.6	52.9	—	—	—	7.3	—
Tin	2.8	—	13.4	30.2	—	—	26.5
Gloves of leather	10.1	17.6	—	—	18.2	—	—
Gloves of textile	19.0	19.8	—	—	24.3	—	—
Bamboo, rattan, willow chip, baskets, etc.	28.0	15.8	—	—	19.7	—	—
Tapestries, linen, and other furnishings	15.8	13.3	—	—	5.2	—	—
Handkerchiefs	25.1	—	—	—	14.5	—	—
Women's cotton coats and jackets	10.7	26.5	—	—	3.0	—	—
Men's cotton coats and jackets	10.5	18.4	—	—	9.0	—	—
Gasoline	12.5	—	11.1	—	—	—	—
Feather, downs, bristles, and hair	41.7	—	—	—	—	—	1.4

NOTE: Same as for Appendix Table A3.1.

4

Development of the ASEAN Petroleum Industry and Implications for ASEAN-China Economic Relations

Hadi Soesastro*

I. Introduction

The energy picture in the ASEAN region is quite diverse, viewed from either the demand or the supply side. This diversity reflects differences in stage of economic development, energy resources endowment, and other factors — including energy policies. Per capita primary energy consumption in the ASEAN region in 1984 ranged from 29.3 barrels of oil equivalent (boe) in Singapore to 1.4 boe in Indonesia. Similarly, the share of non-commercial energy (fuelwood, agricultural waste, etc.) in total primary energy consumption in 1984 varied from an estimated 38.7 per cent in Indonesia and 26.4 per cent in Thailand to only 9.6 per cent in Malaysia and almost nil in Singapore.

The six ASEAN countries, however, share a common feature in that they assign great importance to the petroleum industry in their economies. Indonesia, Malaysia, and Brunei are important regional producers and net exporters of oil and gas. The Philippines, Singapore, and Thailand are net importers of energy in general, and oil in particular. None the less, all three countries also have a sizeable petroleum refining capacity. Singapore, in fact, is the third largest refinery centre and third largest oil trading centre in the world. Thailand has greatly stepped up its efforts over the past few years to reduce dependence on energy imports by promoting the production of natural gas and oil, in addition to coal (lignite). In 1985, production of natural gas and condensate by the Union Oil Co. in the Gulf of Thailand has reached the rate of 327 million cubic feet per day (mmcfd) and 14,136 barrels per day (bpd), respectively. Production of crude oil in the North by Shell has amounted to 20,688 bpd. The Philippines is also producing some oil from ten producing wells.

China, being an important regional producer and a net oil exporter, has developed over the years various relations with ASEAN countries in the field of energy generally and petroleum in particular. For many years, China has been exporting crude petroleum and petroleum products to the Philippines and Thailand, and more recently also to Singapore for refining. The publicity in the past that sales of Chinese crude to the Philippines and Thailand were based on

friendship prices has caused some ill-feelings in Indonesia, which as an OPEC country was not in the position to offer even its neighbours better prices than those set by OPEC, at least to match Chinese offers.

However, China has been regarded as a much greater competitor to Indonesia in the Japanese petroleum import market which is Indonesia's most important customer. As of 1985, Indonesia's share in crude oil imports into Japan of about 11.4 per cent was still considerably larger than that of China which stood at 6.5 per cent. But China's relations with the ASEAN region in the field of petroleum are not necessarily only of a conflicting nature. The more recent past saw the development of some co-operative relationship. Indonesian crude has found its way into China since 1986, amounting in total for that year to about 1 to 1.3 million barrels. Such exports have continued in 1987.

In 1984 China's Sinochem awarded its first term contract to the Shell refinery in Singapore to process 20,000 bpd of crude for one year. Prior to that China had been processing spot volumes in Singapore for some time. A 1985 bilateral trade agreement between China and Singapore included a minimum processing of 60,000 bpd of Chinese crude in Singapore for three years. This development has been welcomed by the refineries in Singapore that have lost a major business opportunity from Indonesia's processing deal with the completion of new refineries in Indonesia in 1985. But with China's current efforts to modernize its refining system, would its processing in Singapore also decrease, and how fast? And what would be the implications for Singapore's refineries?

The above are some of the questions to be examined in this paper. The following section reviews the development of ASEAN's petroleum industry, and its problems and near-term prospects. This will be followed by a discussion of developments in the broader regional energy scene which provide the context for both ASEAN's and China's petroleum industries, in terms of opportunities as well as challenges. The concluding section examines the implications of those developments to ASEAN-China economic relations.

II. ASEAN's Petroleum Industry

As an overview it is useful to begin with an examination of the region's available reserves. Proven reserves of oil in the ASEAN region as of the beginning of 1987 stood at about 12.7 billion barrels, of which around two-thirds are in Indonesia (Table 4.1). Malaysia's and Brunei's shares were 22.3 and 11.2 per cent, respectively.

The past ten years or so saw a considerable decrease of oil reserves by about 32 per cent, from around 18.5 billion barrels in 1976. This suggests that additions to the region's proven reserves have not come about as fast as the rate of increase in the region's oil production. As shown in Table 4.2, the ratios of oil reserves to production for the ASEAN region as a whole have dropped from 32 years in 1975 to 20 years in 1985. The decline was most rapid in the case of Malaysia, from 69 years in 1975 to 20 years in 1985. This development also suggests the need for a continuous search for oil, especially in the ASEAN region where —

TABLE 4.1
Oil and Gas Reserves in the ASEAN and Pacific Regions*

Country	Oil (10^3 bbl)			Gas (10^9 cu. ft.)		
	1976	1982	1987	1976	1982	1987
Brunei	2,000,000	1,630,000	1,420,900	8,700	7,100	7,060
Indonesia	14,000,000	9,800,000	8,300,000	15,000	27,400	49,440
Malaysia	2,500,000	2,800,000	2,820,500	15,000	19,000	49,440
Philippines	—	23,000	16,900	—	16	10
Singapore	—	—	—	—	—	—
Thailand	230	—	101,200	—	12,000	7,40
ASEAN	18,500,230	14,895,000	12,659,500	38,700	65,516	113,35
China	20,000,000	19,895,000	18,400,000	25,000	24,400	30,000
Japan	25,000	70,000	57,000	1,900	800	1,090
North America	49,600,000	94,075,000	86,063,000	280,400	363,250	361,500
Oceania	1,775,000	1,879,800	1,944,800	37,500	24,720	24,870
Other East Asia	15,000	8,000	5,400	1,000	580	910

*Proven reserves at the beginning of year.

SOURCE: *Oil and Gas Journal*, various year-end issues.

in view of the geological nature of its basins — oilfields yet to be discovered are likely to be marginal fields.[1]

TABLE 4.2
Oil and Gas Reserve-to-Production Ratios in the ASEAN and Pacific Regions
(In years)

Country	Oil		Natural Gas	
	1975	1985	1975	1985
Brunei	30	27	492	26
Indonesia	29	19	71	34
Malaysia	69	20	—	298
Philippines	—	5	—	—
Singapore	—	—	—	—
Thailand	—	8	—	51
ASEAN	32	20	169	62
China	35	20	20	50
Japan	6	16	18	15
North America	13	17	11	17
Oceania	12	8	118	38
Other East Asia	10	6	28	23

SOURCE: The Second Symposium on Pacific Energy Consumption, *Energy Statistics*, Tokyo, March 1987.

Reserve estimates have varied widely, in part because of the different methods used. Estimates of undiscovered resources tend to have a much greater uncertainty than estimates of recoverable reserves.[2] In the case of Indonesia, for example, remaining undiscovered resources have been estimated at between 17 to 216 billion barrels, but a large portion of the estimates fall in the region of 40 to 50 billion barrels.[3]

In contrast to oil reserves, proven natural gas reserves in the ASEAN region have increased dramatically over the past 10 years, from about 39 trillion cu. ft. in 1976 to 113 trillion cu. ft. in 1987. The shares of Indonesia and Malaysia are equal at 44 per cent and Thailand's share is approximately as large as that of Brunei, at about 6 per cent each. For the region as a whole, the rate of reserves to production at the beginning of 1987 was 62 years.

Natural gas production has increased significantly in Brunei and particularly in Indonesia and is mainly developed for exports. Brunei's exports to Japan increased from 2 billion cu. m. in 1975 to about 7 billion cu. m. in 1984. Indonesia's exports to Japan developed much faster, from nil to over 19 billion cu. m. in 1984, which made Indonesia since then the world largest exporter of natural gas (LNG), surpassing Algeria. Malaysia has also entered the picture, and its exports — also exclusively to Japan — reached 4.9 billion cu. m. in 1984.

This development suggests that the natural gas sector cannot be ignored in an examination of the prospects of ASEAN's petroleum industry and the region's energy future.

Total crude oil production in ASEAN's three main producers — Indonesia, Malaysia, and Brunei — increased by about 5 per cent per annum over the period from 1974 to 1979, but remained largely stagnant during the subsequent period from 1980 to 1986 (Table 4.3). This latter development was primarily due to Indonesia's decreased production of crude in line with OPEC's decision to impose production quotas among its members. Oil production in Brunei has also been declining since 1979, partly due to its own decision to conserve resources. Among these three countries, only Malaysia continued to increase production, even during the recent oil glut period. Its share of total ASEAN crude oil production increased from less than 5 per cent in 1974 to close to 25 per cent in 1986. LNG exports, which have continued to grow during the past years, partly compensated for the decline in oil export earnings. Exports of LNG from Indonesia increased from US$535 million in 1978 to US$3.8 billion in 1985, but decreased to US$2.8 billion in 1986, since the drop in oil prices also affected LNG prices.

Total petroleum refining capacity in the ASEAN region amounted to about 2.3 million bpd in early 1987, up from around 1.9 million bpd in 1976. Of the total capacity in 1987, 42 per cent is located in Singapore, followed by 28 per cent in Indonesia, 12 per cent in the Philippines, 9 per cent in Malaysia, 8 per cent in Thailand, and only 0.4 per cent in Brunei (Table 4.4). Over the 1976–87 period, the largest addition in refining capacity occurred in Indonesia, and came on stream in 1985. No significant expansions are currently being contemplated in the region, and Malaysia has temporarily cancelled the plan to build a 120,000-bpd capacity in Malacca. This development reflects the slow-down in the growth of petroleum product consumption, both within and outside the ASEAN region. It also reflects surplus refining capacity globally, especially as a result of large capacity increases in the Middle East in recent years, which also directly competes with the refining centres in the Asia-Pacific region.

The developments examined above have greatly affected the economies in the region which in one way or another have relied on the petroleum industry in their development. The net petroleum exporters, Indonesia and Malaysia, have been hard hit by the dramatic drop in oil prices, especially in 1986. The effects have not been as severe in Brunei, a rich sultanate with a very small population base.

Until the early 1980s, up to 75 per cent of Indonesia's export earnings were derived from the oil and gas trade, and also as large as 55 per cent of the government's revenues came from oil taxes. In the fiscal year that ended in March 1987, the contribution of oil and gas to Indonesia's export earnings declined to only 50 per cent, and their contribution to the government's domestic revenues was less than 40 per cent. The severity of this development can be understood when one notes that Indonesia's total export earnings had dropped and government revenues experienced a decline in real terms. Total exports declined from

TABLE 4.3
Oil Production in Brunei, Indonesia, Malaysia, and China
(In thousand bpd)

Country	1974	1975	1976	1977	1978	1979	Av. Annual % Change 1974–1979	1980	1981	1982	1983	1984	1985	1986	Av. Annual % Change 1980–1986
Brunei	200	190	205	220	205	240	3.7	235	175	165	175	160	150	150	−7.2
Indonesia	1,375	1,305	1,505	1,690	1,635	1,590	2.9	1,575	1,680	1,415	1,345	1,410	1,335	1,400	−1.9
Malaysia	80	100	165	185	215	285	28.9	275	250	295	420	440	435	505	10.9
Total	1,655	1,595	1,875	2,095	2,055	2,115		2,085	2,105	1,875	1,940	2,010	1,920	2,055	
China	1,320	1,490	1,675	1,880	2,090	2,130	8.3	2,125	2,035	2,050	2,135	2,300	2,515	2,630	3.6
OPEC	31,055	27,530	31,100	31,680	30,280	31,465	0.3	27,445	23,380	19,930	18,425	18,470	17,215	19,440	−5.6

SOURCE: British Petroleum, *BP Statistical Review of World Energy*, various issues.

TABLE 4.4
Refining Capacity in the ASEAN and Pacific Regions[a]
(In barrels per calendar day)

Country	1976	1982	1987
Brunei	45,000	—	10,000
Indonesia	427,700	498,215	635,800
Malaysia	123,000	175,000	212,300
Philippines	247,000	286,000	286,000
Singapore	922,650	1,096,000	961,000
Thailand	166,200	176,000	191,860
ASEAN	1,931,550	2,231,215	2,296,960
China	(1,250,000)[b]	1,810,000	2,200,000
Japan	5,417,094	5,601,050	4,790,050
North America	18,013,590	22,370,000	18,366,700
Oceania	761,100	815,600	680,100
Other East Asia	769,500	1,269,910	1,404,500

[a]Crude runs, at the beginning of the year.
[b]*BP Statistical Review of World Energy.*

SOURCE: Same as for Table 4.1.

US$22 billion in 1981 to US$19 billion in 1986. The price collapse also forced the petroleum industry in Indonesia to reduce spending and investment. During 1986, investment in exploration, development, and production was 31 per cent below what was planned.

Malaysia's dependence upon the petroleum industry is much less than that of Indonesia. However, its ability to accelerate its industrialization efforts since the early 1980s was due to the dramatic rise in oil export earnings. The importance of the petroleum sector to Singapore's economy also cannot be overlooked. While its contribution to total employment is small, its contribution to output and value added is quite sizeable. In 1980, the petroleum sector's contribution to the manufacturing sector's output was 43.2 per cent; it was 20.8 per cent in terms of value added, and 42 per cent in terms of total foreign investment.[4]

In contrast to the effects on the region's net oil exporters and on Singapore, the drop in oil prices has greatly reduced the import bills of Thailand and the Philippines. The two large oil price increases in the mid-1970s and late 1970s have caused great hardships to these two countries. Overall, they have been able to overcome those difficulties rather well. This is especially true in the case of Thailand, which has also successfully stepped up its efforts to develop its petroleum industry to reduce dependence on energy imports.

The above overview suggests the main issues in the development of ASEAN's petroleum industry, which differ in nature or degree among its six member countries. What follows is a country-by-country survey of the industry's problems and prospects.[5]

1. Indonesia

Current oil-producing capacity is about 1.6 million barrels per day (mbpd). Since December 1986, Indonesia's production quota under the OPEC agreement amounted to 1.133 mbpd, excluding condensate.

The search for oil in Indonesia started in 1872 in Maja, West Java, but oil was discovered only in 1885 in Telaga Said, North Sumatra. With an initial production of 2.000 bpd in 1893, the cumulative amount of oil produced in Indonesia until 1 January 1987 amounted to about 12.1 billion barrels, of which about 9 billion barrels have been produced since 1967, following the government's efforts to revitalize Indonesia's petroleum industry.

Since the early search for oil, five giant oilfields — namely fields with more than 500 million barrels of recoverable oil — have been discovered . They are: Duri and Minas, which are on shore and Handil, Ataka, and Arjuna, all of which are off shore. Their total original recoverable reserves were estimated at 8.2 billion barrels of oil, of which 4.5 billion barrels are in the Minas field. Minas, which is just a little bit short to be called a super giant field, that is a field with an initial recoverable reserves of 5 billion barrels of oil, is the largest oilfield in the Western Pacific, but it only ranks fortieth in the world.

Of the 60 tertiary basins in Indonesia, 37 basins have been explored. Discoveries were made in 23 basins, of which 16 basins proved to be commercial, and of this, only 14 basins have reached production stage. Estimates made by Pertamina geologists in 1985 suggest that 27 per cent of the sedimentary basins are on shore, 42 per cent off shore in water depth of less than 200 metres, and the remaining 31 per cent in deeper waters. Total hydro-carbon resources yet to be discovered have been placed at 84.5 billion boe, consisting of 48.4 billion barrels of oil and 216.8 trillion cu. ft. of gas or 36.1 billion boe.

At present, over 400 oil and gas fields have been identified throughout Indonesia. Twenty-seven large oilfields — namely fields with initial recoverable reserves between 100 to 500 million barrels of oil — have been discovered, as well as another 185 oilfields with less than 50 million barrels of oil initially recoverable. The average size of a small field, on shore and off shore, is 22 and 30 million barrels of recoverable oil, respectively.

Such diverse reserves pattern also generates a highly dispersed industry, involving almost any dimension of company and venture to participate. The main policy issue for the government has been — and continues to be — the creation of a favourable investment and business climate for exploration and development of the country's hydro-carbon resources. This has not been an easy task, and requires an ongoing review of, while maintaining a "stable" relationship with, foreign oil companies which manage nearly all of the oil and gas operations. The essence of the problem is that of devising "fair" shares.

In 1960, Indonesia made an end to the concession system under which the petroleum industry operated and replaced it with the Oil and Gas Law (Law No. 44) in which the state was given exclusive rights to exploit petroleum resources. The creation of three national oil companies in 1961 paved the way for direct

participation of the state in exploration and development. The law stipulated that private and foreign companies conducted their oil operations as contractors to the national oil companies. This differed from the earlier arrangement, by sharing profits rather than providing royalties and by transferring title to the oil to the state. The three foreign companies — Shell, Stanvac, and Caltex — which held oil concessions, surrendered their rights and signed a Contract of Work (COW) agreement with the state oil companies. In 1968, the three state oil companies were merged into Pertamina.

The Production-Sharing Contract (PSC) was devised in 1966, and opened the door for a large inflow of foreign capital. As of the beginning of 1987, seventy-one PSC areas were operated by forty-three foreign companies. The PSC agreement is based on a division of actual production between Pertamina and the contractor rather than net profits. Originally the contractor was allowed to deduct up to 40 per cent of annual crude production for cost recovery, and the remaining production was shared on a 65–35 basis in favour of Pertamina. Pertamina is responsible for the management in the operation contemplated in the contract, and approves annual work programmes and budgets prepared by the contractors; the contractors must work according to the approved budgets. The contractor provides all the financing and carries the risk of all operating cost, and has the obligation to deliver a portion of its share (maximum 25 per cent) for the domestic market (called pro-rata crude), which is valued at a token price.

In view of the sharp increases in oil prices in 1973 and 1974, the government negotiated with the contractors to modify the existing agreements. The new terms called for an 85–15 split in favour of Pertamina. The 85 per cent share was considered to include the contract payment of Indonesian corporation tax liabilities. With the existing low price of the pro-rata crude, the split was effectively close to 88–12.

In petroleum refining, Indonesia now has the capacity to supply its domestic requirements from its own refineries. This may continue during the next ten years or so without having to build new facilities, following the completion of a more than US$4-billion expansion of three refineries in 1984.

The *Oil and Gas Journal* estimated that as of 1 January 1987, the total capacity of Indonesian refineries was 635,800 bpd. With the completion of all refinery expansion projects, Indonesia's total installed refining capacity had increased to 905,000 barrels per stream day (bpsd), that is during a day when it is in operation. Total crude processed in 1986 amounted to 639,000 bpd.

Domestic demand for petroleum products now amounts to about 500,000 bpd. Since 1983, the country experienced negative growth rates in domestic petroleum fuels consumption. This partly resulted from slower economic growth, but was also partly in response to dramatic price increases in the domestic market.

Prices were adjusted upwards by an average of 58 per cent in 1982, again by 53 per cent in 1983, and by another 16 per cent in 1984. These adjustments were necessitated by budgetary considerations since domestic fuel subsidies had become a heavy burden on government finances. These adjustments were also made to check the high rates of growth of domestic fuel consumption experienced in the late 1970s, which went as high as 15 per cent per annum. The government's

programme to diversify sources of energy supplies was also meant to maintain a sizeable amount of exportable energy resources, petroleum in particular.

Given domestic demand conditions and current refinery capabilities, Indonesia has the potential to become a major exporter of refined products in the Asian region.

While the oil sector experienced a slow-down, the natural gas sector of Indonesia has been producing at full steam in recent years. Natural gas production and export revenues from LNG are expected to continue increasing for the next few years.

During 1986, the production of natural gas increased by about 7 per cent to amount to 1.6 trillion cu. ft. Estimates suggest current production capacity of close to 3 trillion cu. ft. As shown earlier, Indonesia has a sizeable amount of gas proven reserves (Table 4.1), with a larger additional potential reserves — including the super-giant offshore gas field in the East Natuna Basin — totalling about 109 trillion cu. ft.

Indonesia began to export gas as LNG in 1977, exclusively to Japan, and has become the world's largest LNG exporter since 1984. The two giant onshore fields, the Arun field in Aceh (North Sumatra) and the Badak field in East Kalimantan, are the main gas suppliers to the Indonesian LNG production system for exports.

At present there are ten operating LNG trains. Six trains are located at Arun, which is operated by P.T. Arun. Gas for P.T. Arun is supplied by Mobil Oil Indonesia Inc. Production from the first three trains is sold under a 1973 contract to a consortium of Japanese buyers, called the "Western Buyers Group". The fourth and fifth trains came on stream in 1984 and provide LNG to a different Japanese consortium, called the "Eastern Buyers Group". The sixth train, which came on stream in late 1986, provide LNG supplies to South Korea under a twenty-year contract involving 2 million tons of LNG annually. Regular shipments to South Korea began in March 1987.

The four other LNG trains are located in Badak and are operated by P.T. Badak. Here, the gas is supplied by Huffco, Total, and Unocal. All four trains provide LNG to the "Western Buyers Group" under the same 1973 contract as with P.T. Arun, as well as a separate contract signed in 1984. A fifth train is currently being tendered, and is meant to supply LNG to Taiwan based on an agreement signed in March 1987 for supplies of 1.5 million tons per year beginning in 1990.

Both P.T. Arun and P.T. Badak are owned by the participants in the gas contracts, namely Pertamina, as a partner with the production-sharing contractor and owner of the rights to the gas on behalf of the government; the Japanese customers; and the production-sharing contractors that supply the gas. The PSC for natural gas is similar to that for oil, except that the government share of production is only 21 per cent. However, multiplying the remainder by the 56 per cent tax rate implies a profit split of 65–35 in favour of the government. There is also a requirement to deliver some gas for domestic use.

Of total sales of natural gas in 1986, 75 per cent are supplied to the gas liquefaction (LNG) plants. The remainder are for domestic use by fertilizer plants,

refineries, and other users, including liquid petroleum gas (LPG) plants. The government has made numerous efforts to increase gas utilization domestically in its energy diversification plans. The use of LPG is encouraged as a substitute for kerosene. LPG production indeed increased from about 470 thousand metric tons in 1982 to over 800 thousand metric tons in 1986. On average, only 30 per cent of total LPG production has been consumed domestically, with the remaining 70 per cent being exported, largely to Japan.

The importance of natural gas today, and over the medium term, rests primarily with LNG exports. Indonesia's LNG industry, however, is dependent on the Japanese market for over 80 per cent of its exports. Similarly, Indonesia's share of over 50 per cent of total Japanese LNG imports has led to policies of diversification. Such mutual dependence or interdependence, can be sustained if appropriately managed.

One important feature of LNG trade today is that both the buyers and sellers are locked together by long-term contracts. Suggestions have been made that as current LNG contracts expire at the beginning of the next century, LNG will become more like a freely traded commodity. This being the case, the challenge to the Indonesian natural gas industry is to stay competitive as a major world LNG supplier.

2. Malaysia

Current production capacity in Malaysia is reported to be around 545,000 bpd.[6] Not being an OPEC member, Malaysia was able to produce up to about 505,000 bpd in 1986, up from an average of 435,000 bpd in 1985. At the beginning of 1985, as a mark of solidarity with OPEC, production was cut by about 20,000 bpd. However, as prices fell, it abandoned the restraints and was lifting some 480,000 bpd later in the year. Its production target was raised to 510,000 bpd for 1986, but in support of OPEC's decision to cutback production for a few months, production dropped to 459,000 bpd at the end of that year.[7]

The drop in oil prices has affected Malaysia in a similar fashion as Indonesia. For some time petroleum has become Malaysia's largest foreign exchange earner. Federal government revenues from oil have dropped from M$5.4 billion in 1985 to an estimated M$2.3 billion in 1987 (based on an average oil price of US$20 per barrel).

Oil search in Malaysia began in 1910 in Miri, Sarawak. Peak production of 5.5 million barrels a year was reached in 1929. After sixty-two years of production, totalling some 80 million barrels of oil, the Miri field reserves were finally exhausted in 1973. The first offshore oil production came from the West Lutong field in 1966.

The overall increase in production from about 275,000 bpd in 1980 to 435,000 bpd in 1985 (Table 4.3) was made possible by the coming on stream of 13 new fields, bringing the total member of producing fields to 27 from 14 in 1980. One giant oilfield (Tapis/Bekok/Pulai) has been discovered, while five fields are classified as large, one medium, with the rest being small. Of the total crude oil

produced in 1985, about 51 per cent came from the fields located in offshore Trengganu, 18 per cent offshore Sabah, and 31.5 per cent offshore Sarawak.

Recoverable oil reserves from a total of 45 offshore oilfields currently stand at somewhat less than 3.0 billion barrels of oil, with 62 and 35 per cent, respectively, held by the two major oil companies producing crude, Esso and Shell. Another 1.2 billion barrels of oil is expected to be discovered by the year 2000.

Malaysia essentially faces the same challenge as Indonesia, namely to maintain its position as an oil exporter and to encourage the necessary huge investment and technology through the active participation of foreign oil companies. With little prospect of discovering giant fields, Malaysia also will have to facilitate marginal small fields. Thus, Malaysia continuously has to confront the issue of providing improved terms and incentives to attract foreign oil companies. In addition, and as distinct from the Indonesian case, Malaysia has to face the recurring problem of federal/state disputes, largely over the division of revenues and over who should pay for development projects. Since the formation of a national oil company, Petronas, Malaysian petroleum has been "federalized" and the states only receive 5 per cent of revenues.

Legislative control of the petroleum industry in Malaysia has evolved over three periods. The first was based on a concessionary system which operated in the states of Sabah and Sarawak and in the states of Peninsular Malaysia up to 1965. The second period began with the Petroleum Mining Rules of 1966, which changed the concessionary system to one of equal profit-sharing between the companies and the government. The third period saw a tightening of the government's control over the petroleum industry with the replacement of the profit-sharing system by a production-sharing system in 1974 under the Petroleum Development Act, which also established Petronas.

The Malaysian PSC, with the agreements reached in 1976, is similar to PSCs in other countries. For every 100 barrels of crude oil produced, the companies get 20 barrels for cost recovery and the government gets 10 barrels as royalty. Of the remaining 70 barrels, 49 barrels (70 per cent) go to the government and 21 barrels (30 per cent) to the oil companies. Petroleum income tax takes 45 per cent of the retained 21 barrels. This leaves the companies with 11.5 barrels. Thus, in total the companies get 31.5 barrels and the government 68.5 barrels. The PSC is to last twenty years, with the option of a four-year extension. In addition, duty of 25 per cent *ad valorem* was imposed on crude oil exports in 1980.

During the negotiations in 1975, oil companies slowed production. Esso, in fact, suspended all exploration and the development of a number of fields. By 1978, however, crude production surpassed 200,000 bpd. Exports of Malaysian crude oil have more than tripled during the period 1975–80 to amount to about 11 million tons (Table 4.5) or an equivalent of 0.2 mm bpd, almost one-fourth of Indonesia's exports. By 1985 its exports reached 16.7 million tons or a little over 40 per cent of Indonesia's exports. Thus, in regional terms, Malaysia has become an important oil exporter.

Malaysian petroleum reserves, however, have been dwindling rather rapidly, with a drop in the reserve-to-production ratio from 69 years in 1975 to 20 years

TABLE 4.5
Malaysia's Crude Oil Exports 1975, 1980–86

	Volume (thousand tons)	Value (M$ million)	% Share of Total Volume			
			Japan	Singapore	Thailand	U.S.
1975	3,240	727	—	—	—	—
1980	11,252	6,709	43.2	20.6	3.2	27.9
1981	10,143	6,921	37.9	35.8	3.7	11.6
1982	11,974	7,694	27.9	46.1	11.0	3.7
1983	14,224	7,871	23.2	44.3	13.1	2.3
1984	16,497	8,737	29.6	33.1	8.4	0.6
1985	16,701	8,698	33.9	25.6	11.1	0.6
1986 (est.)	10,576	3,352	37.5	22.8	11.7	2.7

SOURCE: Malaysia, Ministry of Finance, *Economic Report 1986/87.*

in 1985. Thus, it was not surprising that Malaysia enacted the National Depletion Policy in 1979 to leave some oil discoveries in place and oil production regulated to a maximum of 1.75 per cent of oil-in-place in any given year. This was to guarantee the availability of oil by the year 2000, given the remaining limited amount of recoverable oil. However, discoveries since then improved the outlook of oil availability and the Depletion Policy was revoked in 1982.

Malaysia's dependence on petroleum revenues also increased significantly. This leaves the country with no other choice but to encourage more exploration and development of new fields. To stimulate investment and encourage development of low-volume, high-cost marginal fields, in December 1985 a revised PSC arrangement — which had been under consideration for two years — was announced. The new terms include, among other things:

1. Increased percentages of gross production allowed for cost recovery, from 35 to 50 per cent;
2. Improved profit split for oil on companies on the first 50 million barrels of cumulative production from contract area:
   — to 10 mbpd: 50–50;
   — between 10 and 20 mbpd: 40–60 in favour of Petronas; and
   — above 20 mbpd: 30–70 in favour of Petronas; and
3. Abolition of all bonus payments.

It was questioned whether these new terms were attractive enough to encourage development of marginal fields since only the first marginal field in a contract area is likely to benefit from the revision. Also, the revision made no reference to the existing windfall profit tax, royalties, or export duties. Petronas used these revised terms in offering three offshore blocks for bidding which was responded to favourably by forty companies, including new potential operators.

Like Indonesia, Malaysia has also stepped up natural gas production, and by now has become an important LNG exporter. Production of natural gas (associated and non-associated) grew at a rate of 38.7 per cent per annum, from

258 million standard cu. ft. per day (mscfd) in 1980 to 1,324 mscfd.

Malaysia is blessed with ample reserves of natural gas. Proven reserves have increased by a factor of three in five years, from 19 trillion cu. ft. in 1982 to close to 50 trillion cu. ft. in 1987. Another 21 to 37 trillion cu. ft. of reserves is expected to be found by the year 2000. The discovery by Shell in the Bintulu field off the west coast of Sarawak is so far the largest gas find. Reserves are estimated to be 6 trillion cu. ft.

In view of the dwindling oil reserves, Malaysia has greatly encouraged exploration and development of natural gas as well as intensified its use as fuel, especially as a substitute for fuel oil in electricity generation and in the transport sector. Indeed, the Fifth Malaysia Plan (1986–90) expected an increase in the contribution of gas to total electricity generation from 13.1 per cent in 1985 to 30.9 per cent in 1990.

Thus far, however, the rapid development in gas production is a result of the start in 1983 of LNG production from the plant at Bintulu, Malaysia's current biggest industrial project. The Bintulu liquefaction plant was constructed in 1978 for LNG sales to Japan under a twenty-year agreement starting in 1973. Petronas on the one hand, and Shell and Mitsubishi on the other hand, are parties to this project. Together with Tokyo Gas and Tokyo Electric, they formed a company in Japan to market the LNG. Petronas own an interest of 70 per cent in the marketing company. LNG exports to Japan is expected to increase to 6,890 thousand tons in 1990.

The LNG projects utilized about 74 per cent of total gas sales in 1985. Gas supplies to the project are taken from the Central Luconia and other fields offshore Sarawak. The remaining 16 per cent or so of total gas sales were delivered to various projects of the so-called Peninsular Gas Utilization (PGU) Phase I project. This includes the power station at Paka, a steel billet production plant at Telok Kalong, and a housing area at Kerteh in Trengganu. The ASEAN ammonia-urea plant is also located at Bintulu.

Increase in gas production will be attributable to the coming on stream of PGU Phase II project planned for 1989, which includes the Tuanku Jaafar and Post Kluang power stations along the West Coast, each of 600 MW. Phase II would involve 489 million cu. ft. of gas per day, which is quite considerable compared with the 175 million cu. ft. per day for Phase I. In the Phase II project, Malaysia will also be supplying gas by pipeline to power stations in Singapore. Phase III envisages the construction of a pipeline grid to feed the power stations at Prai in the North. For the time being, Phase II has been put on hold for two years because it is not considered viable until oil prices rise again to around US$28 per barrel.

In addition to the PGU projects in Peninsular Malaysia and the LNG Plant at Bintulu in Sarawak, there is a major gas project, the Sabah Energy Corporation's gas collection system on Labuan Island, to provide gas to three industrial projects, namely the 700,000-ton per year sponge-iron plant, a 2,000-ton per day methanol plant, and a 70-MW power station.

Malaysia's four refineries now have a combined capacity of about 212,000 bpd. Two large refineries are owned by Shell, another one is owned by Esso, and

Petronas has the most recent and smallest refinery. Petronas has delayed a plan to construct a 120,000-bpd refinery in Malacca.

Shell has a programme to upgrade its refinery in Port Dickson and has been involved in two processing proposals. The first was for a commercial-sized methyl tertiary butyl ether (MTBE) - propylene gas processing plant near the LNG plant at Bintulu. In October 1985, Petronas signed a statement of intent to build such a plant but it will be located near Kuantan port on the East Coast of Peninsular Malaysia. It will be using LPG from the Trengganu state gas processing plant and methanol from the Labuan Federal Territory in Sabah.

The other proposal was for the first commercial plant to produce middle distillates from natural gas using the so-called Shell Middle Distillate Synthesis (SMDS) technology. Based on a feedstock of 100 million cu. ft. of gas per day, the SMDS process will yield 11,000 barrels per day of diesel fuel, kerosene, and naphta.

Current financial difficulties make it questionable whether the downstream projects could be expected to be on stream in 1990 as originally planned. None the less it is likely that in the future, and in contrast to oil, exports of gas (LNG) will only absorb a small part of Malaysia's huge gas reserves. The policy objective indeed is to develop uses for meeting the country's own energy needs, and to assist industrialization, while reserving oil for export.

3. Brunei

Oil production in Brunei has been declining by about 7 per cent per annum since 1980, after peaking at some 240,000 bpd in 1979. Since 1983 Brunei began to adopt a depletion policy to limit its daily oil production to around 150,000 barrels until the end of the century, although its present production capacity stands at least at about 210,000 bpd.

Production in 1985 and 1986 stood at about 150,000 bpd (Table 4.3), partly as a result of the oil glut, and is expected to stabilize at this level in line with the government's conservation policy. Unlike many other oil exporters, Brunei has not had to resort to raising its production to compensate for falling revenues brought about by depressed oil prices. Brunei's external reserves, amounting to some US$20 billion, provide a more than sufficient cushion for the economy. Until recently Brunei ran trade surpluses of about US$3 to US$4 billion annually.

The government, however, has realized that the economy cannot continue to rely solely on oil and natural gas, which contribute to over 70 per cent of the country's GDP, 99 per cent of its exports, and more than 90 per cent of government revenues. A twenty-year master plan has been contemplated, including use of its vast reserves of high-grade silica to develop a microchip and optics industry. However, manpower constraints are the biggest obstacle.

Current proven oil reserves are put at 1.4 billion barrels of oil, with a reserve-to-production ratio of 27 years (Tables 4.1 and 4.2). Exploration for oil began in 1899, but the giant Seria field was not discovered until 1929. Offshore drilling started in 1954 and led to the discovery of the second giant oilfield, Southwest Ampa, in 1963. The third giant field, Champion Off-shore, was discovered in

1970. In addition to these three giant fields, Brunei has two large and one small oilfields. Enhanced recovery activities over the next fifteen years are expected to yield an additional 200 million barrels of oil.

Most of Brunei's crude oil production is being exported, since domestic oil consumption amounts to only about 12,000 bpd, or 8 per cent of its current production. Brunei relies more on natural gas to supply its domestic energy needs, namely up to 70 per cent of total energy supply. Oil meets the remaining 30 per cent.

Brunei has only one 10,000-bpd refinery at Seria, which went on stream in October 1983. This makes the nation self-sufficient in regular and premium gasoline, kerosene, aviation jet fuel, and diesel fuel and it will continue to meet the country's own needs until the end of the century. The increase in petroleum product consumption is mostly in the transportation sector — estimated at 15 per cent per annum — but total consumption is estimated at only 4 per cent per annum.

Brunei's recoverable reserves of gas at the beginning of 1987 were estimated at some 7 trillion cu. ft., sufficient for another 26 years at the current rate of production at the order of 900 mscfd. Additional gas finds are still expected in the future.

LNG trade in the ASEAN region was pioneered by Brunei. In 1968 an agreement in principle was signed with the Japanese buyers — Tokyo Electric, Tokyo Gas, and Osaka Gas. Since 1973 Brunei has exported LNG to Japan under a twenty-year sales contract. The five-train plant at Lumut is jointly owned by the government, Royal Dutch Shell, and Mitsubishi, and is capable of producing 5 million tons of LNG per year with an ultimate expandable capacity of 6 million tons per year. In 1985, with the weakening of oil prices, the Japanese buyers became disenchanted with the long-term contract with Brunei and they have called for a review of the deal. Indonesia has faced the same problem. The dispute with Indonesia over price was because it was linked to Indonesia's official selling price of crude oil, and was settled only after nine months of negotiations with the agreement by Indonesia to base LNG prices on the realized export price of crude. Indonesia also agreed to compensate for the over-payment back to February 1986 by giving more LNG in future shipments.

The petroleum industry in Brunei is controlled by Brunei Shell Petroleum (BSP), a 50:50 joint-venture between the government and Royal Dutch Shell. Brunei is not considering the establishment of a state oil company because of manpower shortage. However, the government is known to want to strengthen its control over the energy sector and to have a larger share in BSP.

Except for replacing ageing facilities and developing the presently known reserves, Brunei is not considering any new major developments in the rest of the petroleum industry.

4. Singapore

Singapore possesses no known indigenous hydro-carbon resources in any form, both on shore and off shore. None the less, Singapore has emerged as a major

oil centre: it has five refineries, two major independent storage/terminalling companies, a large number of oil traders, and many foreign oil-service companies catering for the region, (mainly Indonesia and Malaysia).

Singapore's refinery capacity was estimated by *Oil and Gas Journal* to be around 961,000 bpd at the beginning of 1987; (Table 4.4), down from the 1.1 million bpd nameplate capacity. However, the effective capacity was thought to be in the order of 800,000 to 850,000 bpd.[8] This lower effective capacity resulted from the fact that Singapore refineries are currently running mostly Far East crudes, while they were designed to run mostly Middle East crude. It should be noted, however, that this capacity is still quite substantial, especially if compared to the 27,000-bpd capacity in 1961 when the first refinery came on stream.

Singapore's refining industry has emerged in response to developments in the Asia-Pacific refining industry. Historically, the Asia-Pacific region suffered from inadequate refining capacity to meet the demand for petroleum products. In addition, the refining industry in the Asia-Pacific region was unable to meet the demand mix for petroleum products because the existing refineries were relatively unsophisticated.

All together, the five refineries in Singapore, operated by Shell, Esso, Mobil, British Petroleum (BP), and Singapore Refinery Company (SRC) are not much more sophisticated than most other refinery centres in the Asia-Pacific region. This is reflected in the ratio of cracking capacity (hydro- and thermal cracking) to total distillation capacity, which is currently around 19 per cent (Table 4.6). SRC, which is jointly owned by Caltex, BP, and the Singapore Petroleum Company (which is owned in part by the Singapore Government) is the more sophisticated refinery, having a ratio of cracking-to-distillation capacity of about 33 per cent.

A large portion of the refinery capacity was added since 1973. About 65 per cent of Esso's present capacity was added in 1973, and Mobil's refinery at Jurong was expanded from 30,000 to 180,000 bpd after 1973. The SRC refinery at Pulau Merlimau was expanded as late as 1981.

Since 1973, in addition to efforts to increase energy consumption efficiencies in operation so as to stay competitive, the new refinery capacities were designed for greater flexibilities. Singapore has not only become the world's third largest refining centre but is also a major "swing refinery" complex in the Asia-Pacific region which acts to balance shortfalls and surpluses throughout the East-of-Suez supply system. In the early 1980s, the refineries again made huge investments to maintain their competitiveness.

Three other developments took place. The first was the policy to reduce the dependence of Singapore-based refineries on Middle East crudes and to increase supplies from regional producers, particularly Indonesia and Malaysia. The second was a more active but limited role of the government in the petroleum industry, as manifested in the establishment of the Singapore National Oil Company (SNOC), which was aimed primarily at enhancing the country's security of energy supplies. The third development was the growth of third party refining, or processing deals, initially with Indonesia and Malaysia.

TABLE 4.6
Singapore's Petroleum Refineries, 1987
(In thousand bpd)

	Name-Plate Crude Capacity	Vacuum Distillation	Hydro-Cracking	Reforming	Thermal Vis-Breaking	Asphalt	Lube Oil	[(3)+(4)]/(1)*
BP	27	—	—	—	—	—	—	—
Esso	230	49	—	9	—	4	7	—
Mobil	200	70	—	13	45	—	—	22.5
Shell	316	88	18	20	60	4	5.4	24.6
SRC	170	59	27.5	12	28	5	—	32.6
Total	943	266	45.5	54	133	13	12.4	18.9

NOTES: *Cracking-to-distillation ratio.
(a) Hydro-cracking and thermal vis-breaking processes convert the heavier crude into lighter products.
(b) Reforming is used to improve the quality of gasoline.

SOURCE: Fesharaki, F., "Singapore as an Oil Centre", in *Singapore: The Management of Success*, edited by K.S. Sandhu and P. Wheatley (Singapore: Institute of Southeast Asian Studies, 1989).

As to the first development, Singapore refineries which were originally designed to use Middle East crudes, which are heavy and have a high sulphur content, have gradually increased the intake of light, low sulphur Far East crudes. In 1981, about 67 per cent of crude used for the refineries originated from the Middle East, mainly Saudi Arabia. However, after 1984 the discount rates were no longer applicable to Singapore. By 1985, the share of Middle East crudes declined to 43 per cent. The many factors that led to this shift, namely the above discontinuation of concessionary supplies, the greater availability of crude in the region, and the policy of enhancing energy security, have led to reducing the effective capacity of Singapore refineries. Other developments, which will be discussed later, also led to the shut down by Shell of around 140,000 bpd of capacity during 1985 and 1986. Similarly, Mobil has mothballed a 45,000-bpd unit.[9]

About two-thirds of Singapore's refinery output is exported. The small Singapore domestic market for petroleum products, around 232,000 bpd in 1986, included an estimated 121,000 bpd of bunker fuel and 24,000 bpd of jet fuel.[10] More than 90 per cent of Singapore's total export went to the Asia-Pacific region, and this accounted for almost 42 per cent of the region's total import.

As to the second development, the role of the Singapore Government in the petroleum industry remains limited compared to that of other Asia-Pacific countries. It has a one-third share in the Singapore Petroleum Company (SPC), which is part owner of the SRC, and also a 49 per cent investment in the Van Ommeren and Paktank storage/terminalling facilities. The establishment of the SNOC in 1981 by the government was to develop a sixth refinery, but the plan did not get off the ground. Today, the SNOC partially fulfils the role of an energy ministry which is non-existent in Singapore.[11] Its tasks are mostly confined to interacting with the oil companies to ensure the country's security of energy supply.

The third development, namely with regard to contract processing, has greatly affected the health of Singapore's petroleum industry over the years. Processing has become a major element in Singapore's oil business. It can take different forms, namely term, spot, and deemed processing. Term (or long-term) processing is the most important processing business for Singapore refineries. Term processing is defined as processing under contracts for more than one year.

Since the mid-1970s, Indonesia has been the most important source of term processing in Singapore. In 1982, of the 500,000-bpd crude runs, over 200,000 bpd of crude had been processed for Pertamina (or its agents). Pertamina sent both Indonesian and Middle East crudes for processing in Singapore and shipped back the processed products to Indonesia to meet domestic needs. The contract ended in 1985 with the completion of Indonesia's refinery expansion project that resulted in a doubling of capacity from 400,000 to 820,000 bpd.

The loss of the Indonesian business has greatly affected Singapore's refining industry. As the Indonesian processing contract of over 200 mbpd was lost, it was compensated by new processing opportunities. However, the future of term processing for Singapore is quite uncertain. As suggested elsewhere, Singapore's

oil refining industry is being challenged primarily by the potential loss of term processing business, which is partly caused by the construction of new refineries in the region.[12]

Petronas, Malaysia's national oil company, has been the second largest customer of Singapore's refineries. Its processing deal has been carried out under a three-year contract ending in 1987 for volumes of around 75,000 bpd. The expansions in the Malaysian refining industry affected its need for processing to supply the domestic market. However, the Malaysian processing deal was not aimed solely at the domestic market; in fact, only around 20 per cent of the processed products went back to Malaysia with the remainder destined for export. Because of the export orientation of the processing, it cannot be relied upon by Singapore refineries as a long-term business.

None the less, Singapore refineries are still hopeful that Malaysia will continue to provide some business opportunity. In fact, Malaysia's domestic refineries are the least sophisticated refineries in the region, with practically no downstream conversion/upgrading units. As demand increases, Malaysia's dependence on Singapore may increase. A proposed 120,000-bpd refinery in Malacca was postponed in 1985, but a smaller version of 30,000 bpd is being seriously considered.

For long-term processing, China has become an important customer of Singapore, following the first contract awarded by Sinochem in 1984. The processed products found their way into a variety of export markets. Indeed, the increase of Chinese processing seemed to follow the rise in China's crude exports since 1983/1984. Since the discontinuation of contract processing for Indonesia, Singapore refiners had been hoping for deals with China as an alternative. There is the likelihood that processing of Shengli crude in Singapore may increase as Shengli production increases. However, the longer-term prospect of Chinese processing is also quite uncertain. The rehabilitation and modernization of China's refining system are likely to reduce its processing needs in Singapore.

During the first half of 1986, term processing by Singapore refineries amounted to about 250,000 bpd, of which 77,000 bpd (31 per cent) were for Malaysia, 114,000 bpd (46 per cent) for China (Sinochem and agents), and the remainder largely processed on a shorter-term basis (for Iran and other customers). A recent study projected that by 1990 term processing in Singapore may be reduced to 80,000 to 125,000 bpd.[13]

Prior to the term processing deal, China had undertaken spot processing in Singapore for some time. Spot processing needs are difficult to predict. Such processing arrangements usually are on a single cargo basis. During the first half of 1986, an estimated 186,000 bpd of spot processing took place in Singapore, of which close to 40 per cent were undertaken for Iran and about 25 per cent for Indonesian agents.

However, developments during the 1986 have been somewhat unusual, and Singapore refineries were running at near full capacity, caused primarily by the availability of netback crude oil, the continuation of the Iran-Iraq war which has paralyzed a large portion of the Iranian refining capacity, and the strong demand

for products from Singapore's neighbouring markets, including Japan. The same projection referred to earlier suggested that spot processing in 1990 could amount to as low as 25,000 bpd only or as high as 117,000 bpd.[14]

Thus, term and spot processing in 1990 could range from about 100,000 bpd to close to 250,000 bpd. Singapore domestic demand and international transport fuels (bunkering for ships and jet fuels) could be relatively stable. So-called affiliate sales, that is sales to affiliates of Singapore refiners in other countries (or own account processing) have been declining but only gradually. These three categories of processing needs are expected to be in the order of 250,000 to 300,000 bpd up to 1991. Therefore, total processing in 1990 may be expected to amount to 350,000 to 550,000 bpd. It is believed that with a core capacity of 400,000 to 500,000 bpd Singapore's refining industry will be able to survive.[15]

The third type of processing, deemed processing, is essentially only a swap between crude and products. This may be undertaken among traders with crude-product swap based on an agreed ratio.

Oil traders continue to play an important part in Singapore's petroleum industry. The various refineries in Singapore had their own trading activities in both crude and refined products during the 1970s. Since they are no longer able to rely on long-term contracts for the supplies as well as for refined product sales, trading activities have proliferated, involving large and small trading companies that try to match supply with demand.

To support its function as Asia's most important oil trading centre, Singapore has a rapidly expanding storage and tankage capacity. The total storage capacity in the country is currently more than 50 million barrels.

Overall, despite the challenges and threats faced by Singapore's petroleum industry, the changing market conditions in the Asia-Pacific region may offer some opportunities to Singapore refiners and traders in the years to come. The refineries' advantages thus far have been their flexibility and determination to maintain competitive. However, the most serious challenge to Singapore refineries in the coming years is the competition from export refining capacity in the Persian Gulf.

5. Thailand

Thailand is a net oil and energy importer and has been adversely affected by the two previous large increases in the price of oil. Even in 1985, the cost of imported energy still accounted for nearly one-fourth of the total import bill or over 30 per cent of the total value of exports. It is, therefore, not surprising that Thailand's energy policy has been focused on reducing the country's dependence on imported petroleum. The target is to reduce the dependence on imported petroleum to 35 per cent of total energy requirement by 1991 from close to 50 per cent in 1986.

In addition to efforts to diversify energy sources, Thailand has stepped up the search for indigenous petroleum resources. In fact, oil exploration in Thailand dates back to 1921 with activities in the Fang Basin, Chiangmai Province,

Northern Thailand. Oil was discovered only in 1958, and a 1,000-bpd refinery began operation in 1959. In 1962, Union Oil Co. of Thailand (Unocal) was granted rights for oil exploration in Northeastern Thailand, which opened the way to foreign oil companies' activities. The Petroleum Act of 1971 allowed the concessionaires to conduct full-scale petroleum activities. Since then exploration activities began to pick up. The first offshore natural gas discovery was made in 1973 in the Erawan field, Gulf of Thailand. The first commercial oil discovery was made in 1981 in Kamphaeng Phet Province, Northern Thailand, and was brought into production in 1983 as Sirikit field.

Thailand's indigenous petroleum production, consisting of natural gas, crude, condensate, LPG, and natural gasoline, increased sharply from a mere 4.97 m boe (barrels of oil equivalent) per day in 1981 to 108.5 m boe per day in 1985.[16] This amount met about 35 per cent of the country's local demand. In order to meet the 1991 target, accelerated exploration and production plus massive capital investment will be required.

The decline in oil prices in 1986 has slowed down exploration; at best the response by the oil companies has been mixed. In 1985 nine oil companies bid for concessions of which six were approved by the government. It was then estimated that the six firms would spend some US$18 to US$30 million for exploration. However, the collapse of oil prices has forced many to reconsider their spending. Only BP and Britoil have maintained spending levels. With a cancellation of exploration by one company, the Thai Government felt the pressure to re-examine its concession terms.

As shown in Table 4.1 proven reserves of natural gas have decreased rather than risen in recent years. This partly resulted from the year-long disputes between the government and Texas Pacific and Unocal. The dispute with Texas Pacific was over gas prices and over its role in a possible LNG project. Texas was to be excluded from the project which was to be undertaken by a Japanese consortium linked to potential LNG customers. With the decline in oil prices the project has lost its urgency from Japan's point of view. The seven-year dispute over gas prices ended with the intended purchase of Texas Pacific's offshore gas field by the Petroleum Authority of Thailand (PTT). Unocal had a long debate over the extent of gas reserves in the Erawan field as well as a price dispute. The reserves there were ultimately revised to less than one-third of the original estimate and the royalty dispute was settled in July 1986. The royalty dispute came about when gas production from Erawan fell below contracted volumes which resulted in reduced payments. Today, the situation is completely reversed. Unocal's production capacity of about 450 mcfpd surpasses the gas demanded by PTT, amounting to only 350 mcfpd, largely as a result of weakened gas demand domestically. This has led Unocal to shut in about one-third of its producing wells.[17]

The long-term plan of the Thai Government, however, is to maintain production at a 500-mcfpd level by 1988 and 700 to 900 mcfpd in 1991. The additional gas is expected to come from the fields in the northeast, the southern Gulf, and the offshore fields lying between the Thai and Malaysian boundaries.

An agreement was reached in November 1986 between Thailand and Malaysia to jointly exploit petroleum resources along their shared border in the South China Sea. This long-term plan also calls for the development of domestic markets for natural gas. The Natural Gas Development (NGD) Project which was initiated in 1977 reached Phase II of its implementation in 1984, with the commissioning of the first gas separation plant at Rayong. Phase II also included an LPG distribution network. Phase III was meant to develop natural gas-related industries on the Eastern Seaboard Development Zone. Other long-term plans for further gas utilization in the future include a gas pipeline to the Southern coast, a second gas separation plant to meet increasing LPG demand and for petrochemical stocks, development of compressed natural gas (CNG) as transport fuel, and a possible LNG train for export purposes.

Implementation of the projects will largely depend on the development of oil and gas prices, and may be pursued more slowly than initially planned, but it seems that Thailand is determined to continue with its efforts to achieve greater self-sufficiency in energy sourcing. Increased utilization of natural gas is the key in such a strategy.

There are a host of other issues which are considered important for the success of Thailand's energy policy. Pricing policy is a major problem due to strong political pressures to lower petroleum product prices. Improved terms of exploration and exploitation would include a pricing system for oil and gas and the fiscal regime affecting production, such as taxes and royalties. Another issue has been the role of the PTT in Thailand's petroleum industry.

6. Philippines

As a net energy importing country, the Philippines shares the same concerns as Thailand, and its energy policy over the years has been focused also on the problem of overdependence on imported petroleum. Its dependence on foreign energy sources was over 90 per cent in 1973. Key parts of its strategy to reduce import dependence were the construction of a 600-MW nuclear plant and heavy investments in hydroelectric and geothermal capacity. It has also encouraged the development of renewable energy resources and new energy technologies.

Serious efforts to find oil in the Philippines began in 1972 with the introduction of a new petroleum legislation, although drilling for oil began as early as 1896 on Cebu Island. The first offshore oilfield (Nido) was discovered in 1976 by Cities Service off Palawan Island. The largest field discovered to date is the Matinloc field with an ultimate recoverable reserves of 20 million barrels of oil. Thus far less than one-fourth of the offshore basins and less than one-third of the onshore areas have been explored, but no major discoveries are expected in the future. Natural gas in commercial quantity has not been discovered so far.

Production from the Nido field began in 1979, reaching a peak flow of 42,000 bpd and a total output of around 11.5 million barrels on a yearly basis. Production has continued to decline ever since. By 1981, production from the Nido field reached only 1.5 mmb. The nature of this Nido field has cast doubt over the prospects of the two more recent fields, Cadlao and Matinloc. These three

currently producing fields totalled an average production of 8,000 bpd in 1985 and has been estimated to amount to only 4,100 bpd in 1987 and to decline further to 1,000 bpd in 1990.

Petroleum activities had been low for the past years, with no drilling at all in 1985. This situation will probably remain until the end of this decade. The future of the petroleum industry in the Philippines depends to a large extent on the country's political stability. Commercially viable fields to be discovered are likely to be small, namely below 50 million barrels of recoverable oil. In addition, the exploration success rate in the past has been very low.[18] None the less, given the energy deficit of the country, any oil produced will certainly be bought by the government. Improvement of the investment climate, therefore, would be a crucial step to raising the level of exploration activities.

In the Philippines, such activities are governed by the so-called "service contracts" in which the contractors provide the financing, services, and technology for a stipulated service fee. The terms of the Philippines service contracts are considered quite attractive, but a major problem for foreign oil companies is the restriction on repatriation of profits in dollars.

The Philippine refining industry also faces not very bright prospects. The three refineries currently operate at about 55 per cent of their combined capacity. The Bataan refinery, owned by the Philippine National Oil Co. (PNOC), has experienced a continued decline in capacity utilization, to only about 40 per cent in 1985. In fact, the PNOC's Bataan refinery has a rated capacity of 155,000 bpd, over half of the country's total refining capacity.

In a move to revitalize the Philippine petroleum industry, in October 1986 the PNOC announced its plan to privatize. The PNOC was created during the oil crisis in 1973 with the main task of procuring crude oil to ensure a stable domestic supply. Over the years, its activities were expanded to include exploration and exploitation of non-oil and gas resources, as well as to include shipping and related activities. The privatization plan stipulates that the PNOC itself, as a holding company, will remain wholly owned by the government. Much of its interest in petroleum refining and marketing (Bataan Refining Corporation), the core of PNOC's operations, will be sold to private enterprise. Certain shipping and transport companies could also be privatized. The PNOC will remain active in oil exploration and in the development of new, indigenous energy sources.

The PNOC's privatization plan has generated considerable interest from both local and foreign investors. However, the terms offered may not be sufficiently attractive. Foreign equity will be limited to 40 per cent to avoid foreign domination of the petroleum industry. In addition PNOC holdings in the privatized firms will be lowered to not less than a third of outstanding equity to maintain a veto power on policy-making. Furthermore, the two other refineries, Shell (68,000 bpd) and Caltex (63,000 bpd), as PNOC's chief competitors, have been barred from bidding in the privatization. It remains to be seen whether the other oil companies — Esso, Mobil, Gulf, and Getty — that have dropped out already in recent years from the downstream sector of the Philippine petroleum industry will be lured back.

III. The Regional Energy Scene

The above review clearly shows that the ASEAN petroleum industry consists of national industries, each with its own problems, which often tend to be very country-specific. None the less, all these industries do share some common features and challenges.

Firstly, the future prospects of the petroleum industry in both the group of oil-producing countries and the group of oil-consuming (importing) countries very much depend upon developments in the international oil markets. The continued weak oil prices threaten to cause drastic reductions in exploration activities. Given the nature of the oil basins in the region, continuous exploration efforts are necessary. Indeed, it has become harder for the ASEAN countries to maintain their attractiveness to foreign oil companies without providing additional incentives. Therefore, there is the tendency among ASEAN countries to compete with each other. When China is put into the picture, the competition becomes even more pronounced. It remains to be seen how this development would affect ASEAN-China relations.

Secondly, despite the changes in the international oil markets, all ASEAN countries seem to be content with their existing energy policies, which essentially emphasize the need to diversify their sources of energy.[19] The oil-producing countries, on their part, remain interested in the maintenance of export capabilities for as long as possible. The energy-deficit countries also are determined to attain their long-term goal of reducing the independence on imports, both for security and economic reasons. However, the continued weak oil prices tend to complicate the implementation of those energy policies. It is very likely that the same dilemma is faced by China as well. Thus, it would also be of interest to speculate whether or not such a situation would provide some ground for ASEAN-China co-operation.

An examination of the broader Asia-Pacific energy scene seems called for in order to better assess the implications of those developments on ASEAN-China relations as well as to better appreciate the opportunities for ASEAN-China co-operation. Such opportunities are indeed worth examining.

Until today, co-operation in the energy field even among the ASEAN countries themselves is still quite limited. In the petroleum sector, some co-operation began in 1975 with the establishment of ASCOPE (ASEAN Council of Petroleum), comprising various state oil companies in the region. ASCOPE has provided a mechanism for exchanges of views and experiences among those companies. In 1977 it initiated the ASEAN Petroleum Sharing Scheme to provide for emergency situations of critical shortage or oversupply of oil. This scheme was further expanded in 1986 in the so-called ASEAN Petroleum Security Agreement. However, all these schemes are strictly internal arrangements within ASEAN.

By taking a broader regional — that is, an Asia-Pacific — perspective, ASEAN could give a new stimulus to its energy co-operation. This would bring in China, Japan, and perhaps Australia, and the East Asian NIEs (newly industrializing economies), into the picture. There indeed are a number of issues having such broader regional implications which are relevant to the ASEAN countries. The

issue of energy security is definitely a pertinent one. This derives from the fact that most of ASEAN's oil and gas resources are located in offshore areas and therefore, may give rise to tensions among neighbouring countries. In addition, the security of sea lanes passing through the ASEAN region is of major importance to energy flows into the Asia-Pacific region.

Crude oil and petroleum product trade is another such issue. Oil exports are of great importance to ASEAN oil producers; they contributed over 90 per cent of Brunei's total exports, over 70 per cent of Indonesia's exports, and about one-third of Malaysia's exports. This trade aspect is equally important for ASEAN energy-deficit countries. In 1985, oil imports accounted for US$2.4 billion or 26 per cent of Thailand's imports. It was 19 per cent for the Philippines. Singapore recorded a net import of US$7.7 billion and exports (including re-exports) of US$6.1 billion. LNG trade constitutes another issue, which has an even greater regional relevance.

The Asia-Pacific energy scene is characterized by the following developments. Firstly, the dynamic development and high economic growth performance in the region have resulted in a growth of energy demand that is highest in the world. This also led to the highest growth rate of energy trade, involving all kinds of energy. The global economic slow-down has not affected the region's relative position in these regards. Secondly, the region's dependence on oil is high, while petroleum resources in the region are relatively scarce; this situation has made the region a large net petroleum importer. Thirdly, the region has had the problem of considerable imbalances in petroleum product supply and demand mix for some time.

Developments since the 1973/74 oil price increase have led to an overall decrease in the Asia-Pacific region's dependence on the Middle East in its crude oil imports; in 1984 the dependence was reduced to 49 per cent from about 60 per cent in 1975. This resulted from the following efforts: (a) diversification of energy sources; (b) increased petroleum production within the region itself; and, (c) falling demand in Japan and North America.[20]

However, current project demand and trends in crude oil production within the region appear to point to a gradual return in the region's dependence on the supply from the Middle East. If this is seen as posing a security risk for the region, efforts should be made to reverse the production trend.

The regional picture becomes more interesting in the area of petroleum product demand and supply. As mentioned earlier, the region has suffered from imbalances in the supply and demand mix of petroleum products for some time already. On the supply side, except for the refineries in North America, the region's refineries are not sufficiently sophisticated, in the sense of limited cracking capacity. The ratio of cracking to distillation (topping) is less than 20 per cent (above 40 per cent in North America).

On the demand side, there has been marked shifts in the regional pattern of petroleum product consumption, namely towards lighter products. One factor has been diversification which led to a reduction of heavy fuel oil consumption both in industrial use and power generation. Another factor has been the shift in industrial structure away from energy-intensive industries. This trend is

expected to continue, which means that the imbalance in supply-demand mix will tend to increase rather than decrease.

There are different ways of dealing with this problem. The first is to adjust supply through a change in the refineries' crude intake mix, which may involve changing the region's crude intake mix. The second is to upgrade secondary refining facilities, especially cracking capabilities. The third is through increased trade of products.

The growing supply-demand mix imbalances in the past had not increased the region's dependence on outside supply. In the ASEAN region, imports of middle distillates (kerosene and gas oils) had more than doubled during the period 1975–84, but its dependence on Middle East supplies was halved. ASEAN and China have also increased their supplies of middle distillates to Japan and the East Asian NIEs. It should be noted that Singapore's "swing refineries" had played an important role in balancing the region's products supply-demand mismatch.

In 1984, the Asia-Pacific region was still a net exporter of middle distillates, amounting to some 140 m bpd. Projections, based on the assumption of 70 per cent capacity utilization of the refineries (low-case), show that by 1990 the region could turn into a net importer of about 160 mbpd. However, with 90 per cent capacity utilization (high-case), the region could still be a net exporter of about 170 mbpd.[21] The implications of those two different scenarios for the region are different as far as China and ASEAN are concerned. The uncertainty becomes greater because of the real possibility that the region will be faced with greater competition from the new refineries in the Persian Gulf. Another uncertainty is the speed with which Japanese imports of products will increase as a result of the liberalization of its product market.

In addition to intensified trade in petroleum products, the region has also witnessed a sharp increase in gas — particularly LNG — trade. On the import side, Japan dominates the gas picture in the Asia-Pacific region. It is also the largest LNG importer in the world, having a share of about 73 per cent in 1985. On the export side, it is ASEAN that dominates the picture. In 1985, the combined share of Brunei, Indonesia, and Malaysia was about 65 per cent of world LNG trade.

Since 1986 South Korea has become an LNG importer, and Taiwan has finalized a deal with Indonesia. None the less, Japan is likely to remain the largest LNG customer. The various forecasts on LNG demand in Japan suggest that consumption will continue to be on the rise, from about 37.5 billion cu. m. in 1985 to somewhere in the order of 47.5 to 50 billion cu. m. in 1990 and 60 billion cu. m. in the year 2000.[22] New potential suppliers have been identified, to include Australia, Canada, Thailand, and the USSR as competitors to the region's current dominant suppliers. The question of whether market-sharing of the Asia-Pacific LNG trade made sense has been aired for some time but the answer remains inconclusive. ASEAN main oil exporters also happen to be LNG exporters. To them the issue of market-sharing may not be the most urgent one. The issue of LNG pricing remains the most important one, especially when oil prices remain weak. The increased utilization of natural gas other than LNG, for both the domestic market and exports, is an issue of equal importance. In the field of

petrochemicals, the region is likely to face severe competition from the new, low-cost, and vast petrochemical complexes in the Middle East.

In addition to the broader regional perspective, the discussion on the prospects of the ASEAN petroleum industry needs to inject as well the longer-term global perspective. Recent exercises to speculate about the ultra long-term development — that is, over the next forty to fifty years — in the energy field suggest rather interesting directions.

Under quite reasonable assumptions about the long-term GDP growth rates in different regions of the world, per capita final energy consumption by the year 2030 may amount to twice that in 1975. Since 90 per cent of the increased population would be in the developing part of the globe that currently consumes low levels of energy, it is expected that global primary energy requirements by the year 2030 would be in the order of 2.7 to 4.4 times that in 1975 when the amount was 113 mboepd. These are not small magnitudes.

The ultra long-term view of the supply side is equally striking. Recent estimates suggest that at the 1980 production level of 59 mbpd of crude oil, the world's remaining recoverable reserves would last for another 57 to 85 years. In the Asia-Pacific region this is likely to be considerably shorter. Thus, an interesting question is how the current diversification efforts fit into the longer-term global energy transition. The post-oil energy transition will not automatically be realized. A host of factors, such as prices, political constraints, foreign trade patterns, resource availability, and technological developments, will determine this transition.

The historical path followed by the early industrialized countries shows the very long time for an energy source to gain or lose a large market share: approximately thirty to forty years have been required to move up from a market share of 10 to 25 per cent.[23] There is no reason to suppose that lead times will become shorter. An earlier long-term study which explicitly addressed these long lead times offers interesting results.[24] Based on a so-called "substitution model", the study projects the following market shares in the year 2030: 45 per cent natural gas; 40 per cent nuclear power; 7 per cent solar power; 7 per cent oil; and, 2 per cent coal. However, in taking account of the various limitations and constraints on both the supply and demand sides, the study arrived at a totally different picture: 34 per cent coal; 19 per cent oil; 17 per cent natural gas; 23 per cent nuclear power; 4 per cent hydro power; and, 1 per cent solar power.

A major factor accounting for those different results is the growing gap between the demand for liquid fuels and the supply of oil. It suggests that for the foreseeable future the demand for liquid fuels still constitutes the key problem within the world's energy problem. A more recent study also concluded that by the year 2030 the world may still depend on oil for 25 per cent of its energy requirements; coal will supply 23 per cent, natural gas 19 per cent, nuclear power 17 per cent, hydro power 11 per cent, and other sources the remaining 6 per cent.[25] This should imply that the real price of energy — oil and liquid fuels, in particular — is going to be even much higher than what it is in 1980. Would this suggest that the relatively scarce petroleum resources in the Asia-Pacific region be conserved for future uses? Is this posing a challenge to the region to

co-operate more closely with each other in the energy field? How would all these developments affect ASEAN and China, the two regions with relatively more favourable petroleum resources endowments?

IV. Implications for ASEAN-China Relations

The foregoing analysis suggests that the petroleum industries of ASEAN and China have a role to play in the Asia-Pacific energy scheme. The task would be to optimize that role. It is in the efforts of fulfilling this task that ASEAN and China would find themselves forced to co-operate more closely, perhaps also with the involvement of other countries in the region.

The first step should be the creation of a mechanism for regular exchanges of views and information among the national oil companies of ASEAN and China, perhaps in the form of dialogues in the framework of ASCOPE. This should lead to policy consultations and, in some areas such as in exploration and production incentives, policy harmonization as well. The aim should be to reduce excessive competition with each other.

Given the broader regional perspective, as discussed earlier, there are no reasons for the ASEAN oil exporters and China to compete with each other in third markets, such as Japan. If anything, the regional producers will face more severe competition from the Middle East. This is also true in the area of petroleum refining. Both Indonesia and China are likely to export petroleum products in the future, and will be competing with Singapore. It is possible, however, that Singapore's major challenge will come from the Persian Gulf rather than from regional refineries.

There is no reason for ASEAN and China to try to jointly manage the regional crude oil and petroleum products markets. Even within the Asia-Pacific region, ASEAN and China's roles will be limited, let alone in the global market. Also, the regional markets, especially Asia-Pacific, cannot be isolated from the global markets. Thus, both ASEAN and China should not be pressed to play a greater regional role than what they could reasonably fulfil. Such pressures would almost certainly bring them into a collision course.

NOTES

* The author wishes to acknowledge the valuable comments by Mr Guo Peixing of The International Trade Research Institute, Beijing, on an earlier draft of this paper.

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2. See Corazon M. Siddayao, *The Supply of Petroleum Reserves in South-East Asia* (Kuala Lumpur: Oxford University Press, 1980).
3. See Ooi Jin Bee, *The Petroleum Resources of Indonesia* (Kuala Lumpur: Oxford University Press, 1982).

4. Based on Lim Siau Chua, "The Contribution of Oil to Singapore", a speech given at the AIESEC Seminar on "The Role of Oil in Our Economy", National University of Singapore, 31 August 1981, referred to in Francis K. Chan, "The Role of Singapore as ASEAN's Refining Centre and Trader of Petroleum Products", in *ASEAN Energy Issues*, edited by Praipol Koomsup (Bangkok: Thammasat University Press, 1984).
5. This survey partly draws on the information contained in M.A. Warga Dalem, "The ASEAN Petroleum Industry towards 2000", *The Indonesian Quarterly* 14, no. 2 (April 1986).
6. G. Vernon Hough, "Internal Problems Impede Progress", *Petroleum Economist*, May 1986, p. 178.
7. "Gearing Towards Market Demand", *Petro Min*, December 1986, p. 16.
8. John Arbouw, "Singapore Refineries Facing Added Competition" *Petro Min*, June 1987, pp. 21–22.
9. Information received during author's personal interviews in Singapore in May 1987.
10. Shankar Sharma, "The Changing Structure of the Oil Market and Its Implication for Singapore Oil Industry", *ASEAN Economic Bulletin*, March 1988.
11. See Fereidun Fesharaki, "Singapore as an Oil Centre", in *Singapore: The Management of Success*, edited by K.S. Sandhu and P. Wheatley (Singapore: Institute of Southeast Asian Studies, 1989).
12. Ibid.; see also, Fereidun Fesharaki, "The Singapore Story: A Refining Centre in a Transitory Oil Market", mimeographed, April 1984.
13. See Fereidun Fesharaki, "The Outlook for Crude Processing in Singapore: 1986-1991", mimeographed, November 1986.
14. Ibid.
15. Arbouw, op. cit.
16. See "Thailand Report", *Petro Min*, July 1986, pp. 16-18.
17. G. Vernon Hough, "Cheaper Oil Slows Exploration", *Petroleum Economist*, October 1986, pp. 374-75.
18. See M.A. Warga Dalem, op. cit.
19. Asian Development Bank (ADB). "Energy Policy Concerns and Responses to Falling Oil Prices", background paper for the ADB Regional Meeting on Energy Policy, Manila, 11-12 December 1986.
20. See Takao Tomitate and Yoshiki Ogawa, "Oil Supply-Demand and Trade in the Pacific Region", *Proceedings of the Second Symposium on Pacific Energy Co-operation (SPECII)*, Tokyo, 5-6 March 1987.
21. Includes only the U.S. West Coast; ibid.
22. See "Prospects for Natural Gas Trade", *Petroleum Economist*, May 1986, pp. 158-59; also, Jun Nakajima, "Use of Natural Gas in the Pacific Basin", in *Proceedings of the Second Symposium on Pacific Energy Co-operation* (1987).
23. See M. Lonnroth et al., *Energy in Transition* (Berkeley: University of California Press, 1980).
24. Alan McDonald, *Energy in A Finite World — Executive Summary*, rev. (Vienna: International Institute for Applied Systems Analysis, October 1981).
25. Japan, Ministry of International Trade and Industry, *The Twenty-First Century Energy Vision* (Tokyo: Japan Co-operation Centre for Petroleum Industry Development).

5

Development of China's Petroleum Industry and Its Effect on China-ASEAN Economic Relations

Shao Zuze, Guo Peixing, and Li Yong

I. Introduction

China's trade relations with the countries of ASEAN goes back a long time. These relations underwent a critical change in the 1970s and since then bilateral trade has expanded considerably. In 1970, trade values were only US$180 million; by 1980 they had grown to US$1.85 billion, and by 1986 to US$3.35 billion, a more than a seventeen-fold increase over 1970. The variety of commodities traded has grown considerably, with petroleum as one of the important commodities. The proportion of petroleum in this trade is not large, but with the recent growth of the petroleum industry in Brunei and Indonesia, the countries of ASEAN have been closely watching the expansion of China's petroleum industry and its exports. This paper is a study of the development of China's petroleum industry and its effect on economic relations between China and ASEAN.

II. Development of the Petroleum Industry in China

China was one of the earliest countries to discover and use petroleum and natural gas. More than 2,000 years ago, in the Qin and Han Dynasties, oil and gas were found in what are the modern provinces of Gansu, Shaanxi, and Sichuan. The *Annals of the Han Dynasty* record the existence of an "inflammable stream" near the present-day city of Yan'an, and note that the liquid was used for lamps, lubrication, as an anti-corrosive, and as fuel for boiling bitter to make salt. However, the use of petroleum as a source of industrial energy has a short history of less than a century.

China's modern petroleum industry dates from the end of the nineteenth century. However, the semi-feudal, semi-colonial nature of the society precluded the establishment of a national industry. A few fields were exploited but soon fell

into disrepair and near bankruptcy. By 1949, there were only eight outdated oil rigs producing 120,000 tons. China was called an "oil-poor country".

1. Petroleum Prospecting and Growth

With the founding of the People's Republic of China (PRC), the petroleum industry began to develop rapidly. Many new fields and rich underground reserves were discovered.

The first finds were in the Western Region of the country, with prospecting of the Kelamayi field in Xinjiang, the Yaerxia field at Yumen, Gansu, and the Lenghu field in Qinghai. Production bases were established to exploit these resources. Subsequently in 1959, the Daqing oilfield was discovered in the northeastern Heilongjiang province. After the construction of the Daqing petroleum complex, exploration over a period of ten years revealed petroleum reserves in the region of the Gulf of Bohai, an area of 900,000 square kilometres, encompassing the provinces of Hebei, Henan, Liaoning, and Shandong and the municipalities of Tianjin and Beijing. The Shengli and Dagang fields were opened and then the Liaohe and Huabei ones too. In the following years, the Zhongyuan field was discovered. This is the second largest petroliferous area in east China after the one in Daqing and Jilin. The exploitation of these two regions has shifted the focus of petroleum production from the west of China to the east, and greatly changed the geographical distribution of the petroleum industry. In recent years, there have been further discoveries of underground petroleum reserves; thirty structural petroleum-gas deposits have been found in various parts of the country, and petroleum is starting to flow from the drilled wells.

Prospecting of offshore resources began in the sixties. In 1975, the experimental platform in the Gulf of Bohai began producing China's first offshore petroleum. Since 1979, with the initiation of the policy of opening to the outside world, China has begun to co-operate with foreign companies in the exploration and development of its undersea deposits. This is a new stage in which foreign capital and technology are helping to fully develop the resources. Between 1982 and 1986, the petroleum industry held two rounds of bidding for contracts. The first, between February 1982 and December 1983, resulted in the China National Offshore Oil Corporation (CNOOC) signing eighteen contracts with twenty-seven companies from nine different countries, involving a total of 39,200 square kilometres of ocean. The second round of bidding began in November 1984 for contracts in the area covering the mouth of the Pearl River, the eastern part of the Yingge Sea, and parts of the Yellow and South China Seas. This area of 108,300 square kilometres is divided into twenty-two blocks. A system of open bidding was used for all companies, regardless of whether or not they had participated in the exploration itself. Conditions in the contracts were basically identical with those of the first round. These were as follows:

1. The foreign company unilaterally assumes the risk.
2. During the developmental stage, the Chinese side has the right to invest.
3. Industrial and commercial taxes are deducted during the operational stage.

4. After oilfield royalties, operation costs, and investment returns are deducted, both parties will divide the profits and pay taxes to the Chinese Government.

The main items foreign companies competed for were the proportion to be divided with the Chinese side, and the volume of contractual prospecting to be undertaken. Some fiscal terms for contracts, such as the percentage of profit split, arrangements for investment recovery, etc. will be negotiated and determined on the principle of mutual benefit according to the resources assessments made by both parties, so that the foreign contractor could have a reasonable return under the petroleum price conditions during the contract life. China will hold further rounds of bidding as the need arises (See Appendix A5.1).

As a result of this first stage of Sino-foreign co-operation, China has developed data on the petroleum deposits in the contracted blocks. A number of petroliferous structures have been discovered. Simultaneously, feasibility studies have been carried out and preparations made for exploitation. Up until June 1986, 345,500 line kilometres seismic had been shot, 162 wells had been drilled of which 65 struck oil, and 120 structures had been tested by drilling and 35 of which were found to bear gas and oil. This gives a 29 per cent success ratio. Some of these fields are now under construction.

In order to fully and more extensively meet the target of Sino-foreign co-operation, China has adopted even more flexible approaches. Below are some examples.

(1) With respect to co-operative exploration, China will take the approach of phasing out such exploration, that is allow foreign contractors to sign with CNOOC a geophysical survey or drilling agreement for areas of interest and take few commitments first, with the option of entering into a petroleum contract according to the results of exploration, so that the risk on foreign investors will be reduced.

(2) China will adopt a less stringent policy for some highly risky areas such as deep water areas, that is allow foreign contractors to have a large contract area, longer exploration period, and flexible acreage relinquishment proportion, to have fewer or no Chinese participating shares, and to speed up the exploration cost recovery, etc.

(3) China will try to maximize the reduction of financial burdens to foreign contractors beyond explorations, for example the signature fee can be paid by instalments under certain conditions, and the training and technology transfer fees can be reduced or paid by instalments.

(4) During the period of field development, the authorities will ensure reasonable profits for foreign contractors by reducing the royalty and improving cost recovery according to the size of fields, so that these fields can be developed on the principle of mutual benefit.

(5) All contracting services needed in the exploration and development operations, except those few specified by the Chinese Government that tenders must be called for in China, will be selected by way of international tenders.

Meanwhile, Chinese contractors, including the joint-ventures with foreign companies in co-operation with Chinese firms, enjoy priorities on a competitive basis.

We firmly believe that the Chinese offshore petroleum industry will be developed vigorously in the future. The current level of exploration is still low and only a small fraction of the rich petroleum reserves have been prospected so far. Experts estimate that China's petroleum reserves are between 300 to 600 billion metric tons. Natural gas deposits are roughly 20 trillion cubic metres. These will take a long time and much funding to determine precisely. Although new deposits are continuously being discovered, they are still insufficient to support the annual 130-million-ton capacity of present production equipment over a longer period of time. Most of the petroleum and gas locations are on the continental shelf, in Daqing, Shengli, Zhongyuan, Sichuan, and Xinjiang. Estimates of proven reserves place them at about 2.6 billion tons, sufficient to sustain present levels of production for the next twenty years only.

2. Production

China's recovery of petroleum has been increasing steadily since the founding of the PRC. In 1978, output exceeded 100 million tons for the first time. In 1986, it reached 130.9 million tons (Table 5.1). Daily production today is triple the annual production of 1949. Early in the fifties, China ranked twenty-seventh among oil producers in the world; today she is sixth.

Ninety per cent of China's petroleum comes from the northeastern, northern, and eastern parts of the country (Table 5.2). In 1986, the output shares of the

TABLE 5.1
Petroleum Production, Consumption, and Import-Export Trade
(In 10,000 tons)

Year	Production	Consumption	Export	Import
1949	12	144[a]	—	4.04[b]
1960	520	664[c]	6.28[d]	59.40
1970	3,065	3,008	19.15	47.26
1975	7,706	6,700	987.79	175.85
1978	10,405	9,092	1,131.32	68.98
1980	10,595	8,759	1,330.89	36.56
1985	12,490	9,176	3,117.36	71.68
1986	13,069	9,659	2,846.19	107.50

[a]Figure for 1953.
[b]Figure for 1950.
[c]Figure for 1959.
[d]Figure for 1962.

SOURCES: China Statistics Publishing House, *Statistical Almanac of China, 1984/1987*; China Foreign Economic Relations and Trade Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1984*; China Prospect Publishing House, *Almanac of China's Foreign Economic Economic Relations and Trade, 1987.*

TABLE 5.2
China's Petroleum Output, 1986
(In 10,000 tons)

Locality	Output
National Total	13,068.81
Heilongjiang Province	5,555.24
Shandong Province	2,950.80
Liaoning Province	1,020.99
Hebei Province	1,000.97
Henan Province	880.78
Xinjiang Autonomous Region	550.53
Tianjin Municipality	413.33
Jilin Province	237.02
Gansu Province	156.29

SOURCE: China Statistics Publishing House, *Statistical Almanac*

TABLE 5.3
Petroleum Output of Major Chinese Oilfields, 1986
(In 10,000 tons)

Oilfield	Production
National Total	13,068.81
Daqing	5,555.20
Shengli	2,950.80
Liaohe	1,021.00
Huabei	1,001.00
Zhongyuan	630.20
Xinjiang	550.50
Dagang	391.00
Henan	250.10
Jilin	237.00
Changqing	145.10
Jianghan	103.00

SOURCE: Statistics of the China Ministry of Petroleum Industry.

various major oilfields were as follows: Daqing, 42.5 per cent of national production; Shengli, 22.6 per cent; Liaohe, 7.8 per cent; Huabei, 7.7 per cent; Zhongyuan, 4.8 per cent; Xinjiang, 4.2 per cent; Dagang, 3 per cent; Henan, 1.9 per cent; Jilin, 1.8 per cent; Changqing, 1.1 per cent; and Jianghan, 0.8 per cent (Table 5.3).

The increase in petroleum output has spurred the development of the petroleum refining industry. In the early years after 1949, national processing capacity was a mere 110,000 tons and only 12 different kinds of products could be produced. In 1986, total refining capacity increased to 107.5 million tons. In

the early sixties, China succeeded by her own efforts in developing advanced processes of catalyst cracking, delayed coking, catalyst platforming, and urea dewaxing, as well as the industrial production of corresponding catalysts and additives. Later, techniques of hydrofining were imported, reducing the technology gap between the Chinese and foreign refineries. Today, petroleum products have increased to some 730; supplies of the various oils and oil products needed by the civilian economy and national defence are basically assured, and there is a small excess for export. However, in general, the operating standards are still far behind the most advanced world ones, and future efforts will be directed toward cutting waste, preserving energy, improving quality, and strengthening comprehensive utilization.

China had no petrochemical industry in 1949. The earliest factories were established in the late fifties, the Gaoqiao in Shanghai and the Lanzhou Petrochemical Company in Gansu. A tube-style heater producing 5,000 tons of ethylene annually was completed at the end of 1961. In 1974, China succeeded in making cisbutadiene rubber and industrial production began at the Yanshan Petrochemical Company and the Shengli petrochemical plant. Around 1976, five petrochemical and chemical fibre complexes were imported, as well as thirteen sets of synthetic ammonia equipment which use petroleum and gas as raw materials. These contributed to raising the technological standard of China's petrochemical industry. In 1977, ethylene output reached 300,000 tons, while outputs of plastics, chemical fibres, and synthetic rubbers have increased several fold. Since 1979, the pace of development has been speeded up. Ethylene output is now at about 700,000 tons or nearly 2 per cent of world output, up from less than 1 per cent in 1970. Plastics, synthetic rubber, and fibres are now respectively 1.7, 1.6, and 4 per cent of world production.

3. Import-Export Trade

In 1961, China began to export diesel oil to Albania; in 1962, crude petroleum to the Democratic People's Republic of Korea, and in later years petroleum products to Vietnam and Romania. In 1962, crude petroleum exports were about 60,000 tons and oil products 27,000 tons; in 1969, crude exports were 100,000 tons and petroleum products, 140,000 tons. The quantities were small, but they marked the beginning of China's petroleum exports.

Exports continued to increase in the 1970s. In 1972 petroleum products were exported for the first time to Hong Kong. However, it was in 1973 that petroleum exports entered a new stage, with the first-ever sale of 1 million tons of Daqing oil to Japan. By 1978, sales abroad had reached 10 million tons; in 1984, 20 million tons; and in 1985, over 30 million tons. There was a slight drop in 1986 to 28.46 million tons. Since 1976, when annual export of petroleum was 8.49 million tons, China's exports have increased 2.4 times at an average annual rate of 12.9 per cent (Table 5.4).

In the seventies, when Chinese petroleum first entered the international market, the biggest buyer was Japan, with 99.5 per cent of total exports in 1973.

TABLE 5.4
China's Imports and Exports of Crude Petroleum, 1950–86
(In 10,000 tons)

Year	Exports	Imports
1950	—	4.04
1960	6.28*	59.40
1970	19.15	47.26
1975	987.79	175.85
1980	1,330.89	36.56
1981	1,375.40	7.02
1982	1,520.37	64.45
1983	1,519.42	36.99
1984	2,229.27	24.58
1985	3,117.36	71.68
1986	2,846.19	107.50

*Figure for 1962, when China started exporting crude petroleum.

SOURCES: China Foreign Economic Relations and Trade Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1984*; China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1987.*

As exports increased, China adopted a policy of diversifying, and began to develop sales to other Asian countries, the United States, and some European and Latin American countries.

By 1986, exports to Japan had dropped to 39.4 per cent of total foreign sales, Singapore received 21.9 per cent and the United States 14.6 per cent. These three together accounted for three quarters of China's petroleum exports. Other important buyers were Brazil, the Democratic People's Republic of Korea, Spain, and Turkey (Table 5.5).

Currently, China is also exporting a limited quantity of processed petroleum. In 1986, 5.51 million tons were exported (Table 5.6), double the 1.94 million tons of 1976. Over 80 per cent of this was diesel oil, gasoline, and naphtha. The processed petroleum went mainly to Japan, Singapore, the United States, Hong Kong and Macao, and Switzerland (Table 5.7).

With the rapid growth of petroleum exports, China's petroleum imports have dropped. The 1984 crude petroleum imports of 245,800 tons were one-third less than those of 1980; though in 1986 they rose to 1.07 million tons, this was still 40 per cent below the 1975 figure, when imports were at the peak (Table 5.4).

4. Consumption

While China's petroleum industry has grown by leaps and bounds since the establishment of the PRC, it has been matched by an equally steep rise in consumption as the national economy developed. Estimates for 1986 place

TABLE 5.5
Importers of Chinese Crude Petroleum, 1986

Importing Country	Quantity (10,000 tons)	Share in the Total (%)
Japan	1,122.36	39.4
Singapore	621.96	21.9
United States	416.85	14.6
Brazil	273.55	9.6
D.P.R. Korea	124.48	4.4
Spain	89.92	3.2
Turkey	66.83	2.3
Philippines	47.88	1.7
Yugoslavia	31.29	1.1
Italy	23.04	0.8
Chile	11.79	0.4
Romania	5.95	0.2
France	4.73	0.2
Total	2,846.19	100.0

SOURCE: China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1987.*

TABLE 5.6
Exports of China's Oil Products, 1950-86
(In 10,000 tons)

Year	Quantity
1950	—
1960	0.05*
1970	19.32
1975	210.06
1980	420.27
1981	459.15
1982	527.20
1983	511.98
1984	580.57
1985	635.35
1986	551.53

*Figure for 1961.

SOURCES: China Foreign Economic Relations and Trade Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1984*; China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1987.*

nation-wide energy consumption at the equivalent of 808.82 million tons of standard fuel, of which petroleum makes up 17.06 per cent with 137.98 million

TABLE 5.7
Importers of Chinese Oil Products, 1986

Importing Country & Region	Quantity (10,000 tons)	Share of the Total (%)
Japan	189.87	34.4
Singapore	105.82	19.2
United States	103.64	18.8
Hong Kong	90.08	16.3
Switzerland	28.57	5.2
Macao	10.00	1.8
Philippines	5.48	1.0
United Kingdom	3.62	0.7
Thailand	3.49	0.6
Total	551.53	100.0

SOURCE: China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1987.*

tons (or 96.59 million tons of crude). This is already over sixty times the 1953 level (when consumption of crude was 1.44 million tons) and over a third more than the 1975 figure of 67.0 million tons of crude.

The enormous growth in petroleum production is still far from sufficient to satisfy the needs of the Chinese economy. For example, China's GNP increased at an annual average rate of 10 per cent between 1980 and 1985, while total energy production only grew at an average annual 4.8 per cent, with petroleum a mere 0.8 per cent. In the same period, the number of automobiles grew from 2.12 to 4.0 million, an 88.7 per cent increase and tractors from 2.91 to 5.33 million, an 83.2 per cent increase; but national supplies of processed petroleum only grew by 17 per cent. This gap between supply and demand is becoming more marked over time and the shortage of energy is one of the most important factors holding back the growth of the Chinese economy. It is estimated that, nation-wide, 20 to 30 per cent of industrial production capacity is unused due to lack of energy. Many motor vehicles and tractors are lying idle, or are not used to the full, thus adding to the already serious lack of transportation.

Consequently, apart from actively encouraging the exploitation of energy resources and production, China has been compelled to take measures to improve the management of petroleum consumption and energy saving. The main steps are as follows:

1. *Tighter control and unified planning of supply and sale of processed petroleum.* A strict system of distribution and quotas is in place. All users must verify their annual consumption of petroleum in accordance with their quota, and must be responsible for abiding by it. All petroleum products are supplied only to certified users and any petroleum saved can be kept by the user, but no extra is given.
2. *Tight control on oil-burning machines and national organization of transport facilities.*

3. *Strict control over burning of petroleum.* In accordance with the policy of replacing petroleum by coal adopted by the State Council, between 1980 and 1985 China will cut petroleum-burning by 10 million tons, and by another 10 million tons between 1985 and 1990. By 1990, petroleum-burning will be down from the 40 per cent of crude production in 1980 to only 18 per cent.
4. *Tight control of development of small petroleum refineries.* Small local refineries are prohibited.
5. *Periodic review of practical results so that effective petroleum-saving measures can be taken.*

5. Prospects

China's economy has started to develop steadily and soundly. By the end of this century, GNP will double, and on this basis, after a sustained effort of thirty to fifty years, China hopes to approach the level of the developed countries. Industry (including the automobile), agriculture, transportation, and all other areas will also develop. It is predicted that China's need for petroleum products will grow even more rapidly. It seems likely that the sharp discrepancy between supply and demand will be very difficult to overcome.

In accordance with China's economic orientation, efforts will be made within the next period to create favourable economic and social conditions for economic reforms. The goal is to establish as quickly as possible a new socialist economic structure with Chinese characteristics. Steady development of the economy and improvement of the living standards of rural and urban populations must be assured. While controlling the scale of fixed asset investments, key projects will continue to be built, and technological reform and manpower development encouraged. This will provide the necessary material, technological, and human capacities for the growth of the 1990s. To this end, there will be further adjustment of the industrial structure, including the concentration of funds and materials to spur energy production. Through price, tax, and loan policies, attempts will be made to ease the shortage of energy to prepare for the decade of the 1990s.

In 1985, China's total energy production was 855.46 million tons (in terms of standard fuel). Coal represented 72.8 per cent, petroleum 20.9 per cent, hydroelectricity 4.3 per cent, and natural gas 2.0 per cent. Total production was a 34.2 per cent increase over that of 1980, or an average annual growth of 6.1 per cent. Average annual petroleum output grew by 3.3 per cent and coal by 7.1 per cent. According to the Seventh Five-Year Plan, petroleum production will continue to develop at an even faster pace in the next five years. By 1990, production is estimated to reach 150 million tons, or 20.1 per cent more than in 1985. This will raise the average annual growth rate to 3.7 per cent. Particular emphasis is going to be laid on offshore exploration and development. Broad plans call for large-scale prospecting of resources in the 1980s to determine the size of deposits. The small number of oilfields discovered first will be exploited. The 1990s will see large-scale development of offshore oilfields, in order to sustain present production levels. Within the next five years, China must drill 60 million

metres of drilling footage to raise production capacity of crude by 60 million tons. New refineries will be built to match this increase, so as to satisfy domestic needs for processed petroleum.

However, in spite of all these efforts, it still looks as if energy, particularly petroleum energy, will be insufficient for the country's needs. For example, within the next five years, the number of automobiles is expected to rise from 4 to 8.4 million. Even conservative estimates are as high as 6.5 to 7 million (or an average annual increase of 10 per cent). Today, over 85 per cent of the automobiles, including a large number of public buses and trucks under eight tons, use gasoline as fuel (in 1985, estimates of consumption of gasoline nation-wide was 14 million tons). There will probably be very little change in this situation before 1990. Gasoline output by 1990 is estimated at about 24.5 million tons, but average annual gasoline supplies per vehicle will be 20 to 25 per cent lower than those for 1984.

Supplies of diesel oil are even more critical and this probably will not change. In 1985, China consumed 19 million tons of diesel, primarily in the countryside where there are 5 million tractors and large numbers of small, hand-tractors of 12 horsepower and less. Many of these are used for transport, and consume up to 260 per cent more fuel for every kilometre than the average truck. By 1990, it is estimated that there will be a total of 190 million horsepower of diesel-fuelled vehicles in the countryside. Based on the 1970s average fuel consumption of 130 kilograms per horsepower/kilometre, this will mean that 90 per cent of China's total diesel production will be used up for this purpose alone.

Demand for other petroleum products is also expected to grow. For instance, kerosene is still widely used in the rural areas for cooking and heating, but the main consumer is the aviation industry which uses over 70 per cent of national output. By 1990, output of jet engine fuel is expected to reach 5 million tons, an average annual increase of 10 per cent. However, civilian and freight air transportation is expected to grow by 20 per cent every year. In the case of naphtha and light diesel oil, their demand by the petrochemical industry will grow enormously. By 1990, naphtha output is expected to reach 7.5 million tons, of which 3.5 to 4 million tons will be used for the petrochemical industry.

We predict that over the next ten to twenty years, and even further into the future, energy, especially petroleum, will continue to be in short supply in China.

It has been mentioned earlier that China greatly increased its petroleum exports starting in the 1970s. In view of its energy shortages, this petroleum could have been kept back for domestic use. However, as a developing country with a relatively backward economy, such exports form one of the most important ways of earning foreign exchange. Selling some petroleum to countries which either have insufficient supplies or lack it entirely is a satisfactory way of "exchanging needed goods". This export is also partly to make adjustments for uneven supplies in the northern and southern regions of the country. For some time in the future, petroleum will continue to be one of China's major exports, but the quantity will be limited. The volume for export is expected to remain roughly at the present level for a long time to come; even if there is an increase, it will be very small.

According to estimates by some analysts in Western countries, it is quite likely that for the remainder of the 1980s total petroleum exports will grow to no larger than 800,000 bpd (or about 40 million tons annually) before beginning to decline in the 1990s. By 1995 Chinese exports may fall to around 500,000 bpd (or about 25 million tons annually).

China's coal reserves are estimated to be 5 trillion tons, with 870 billion tons already confirmed. This guarantees the further increase of coal output. In 1968, it was 890 million tons. By the end of the century, output is expected to reach 1.4 billion tons. Massive exports will be possible if prices remain appropriate and transportation and quality adequate. This will reduce the need to export petroleum.

III. Petroleum in China's Economic Relations with ASEAN

1. Significance of Petroleum in the Economy and Trade of ASEAN Countries

The development of the petroleum industry in the ASEAN countries differs greatly, depending on their oil reserves and economic development. Indonesia, Malaysia, and Brunei are major oil producers and net exporters. In 1985, Indonesia produced 66.5 millions tons; in recent years its petroleum and natural gas exports accounted for 70 per cent of its export earnings and two-thirds of government revenues (Tables 5.8 and 5.9). Malaysia produced 21.65 million tons in 1985. Its exports of petroleum, petroleum products, and liquid natural gas made up about 32 per cent of its total export value for that year. Brunei's output for 1985 was 8.38 million tons; in recent years, its exports of oil and natural gas accounted for over 98 per cent of its total export value.

The Philippines, Singapore, and Thailand produce very little petroleum or none at all, and are net importers. In 1985, 40.8 per cent of energy in the Philippines came from imported fuel. Singapore relies completely on imports. However, it possesses a relatively large refining capability and is the third largest such centre in the world. Most of its refined products are for export, with 1985 export values reaching US$6.1 billion, or 26.7 per cent of its export values. Singapore is also the largest exporter of petrochemical products in Southeast Asia. Thailand can only meet 30 per cent of its energy needs with its own resources; the rest must be imported. This is also one of the main reasons for its trade deficit.

2. Petroleum Trade between China and ASEAN

Co-operation in petroleum between China and its trading partners in ASEAN has always been important to both sides. In the 1970s, when China's petroleum industry was just getting started and quantities available for export were small, there was a shortage of petroleum on the international market. China began

TABLE 5.8
Petroleum Output of ASEAN Countries, 1950–85
(In 10,000 tons)

Country	1950	1960	1970	1975	1980	1985
Brunei	411.60	458.30	668.50	929.0*	1,250.0*	838.0
Indonesia	667.30	2,024.50	4,259.80	6,413.80	7,763.30	6,650.0
Malaysia	—	—	85.90	468.10	1,324.50	2,165.0
Philippines	0	0	0	0	53.50	40.0
Singapore	—	—	—	—	—	—
Thailand	0	0.6	1.0	0.6	0.8	178.80
Total	1,078.90	2,483.40	5,015.20	7,811.50	10,392.10	9,871.60

*Estimate of the United Nations Statistics Division.

SOURCES: U.N., *Yearbook of Energy Statistics*; EIU, *Yearbook of Energy, Far East and Australasia, 1986/87.*

TABLE 5.9
Petroleum Trade of ASEAN Countries, 1970–85
(In 10,000 tons)

Country	1970	1975	1980	1983	1985
Brunei					
Export	579.2[a]	883.5	1,121.8	850.4	320.0
Import	—	—	—	—	—
Indonesia					
Export	3,102.8	5,241.2	6,201.5	5,489.4	3,600.0
Import	—	2,188.1[b]	490.3	321.1	400.0[d]
Malaysia					
Export	33.7	0.4	1,122.7	1,422.4	1,750.0
Import	299.0	323.4	396.1	307.1	300.0[d]
Philippines					
Export	—	—	—	—	—
Import	909.7	913.8	883.2	752.3[c]	790.0[d]
Singapore					
Export	0.7	24.3	12.5	46.5	35.0[d]
Import	1,078.4	1,810.1	2,508.5	3,065.6	2,944.6
Thailand					
Export	—	—	—	—	—
Import	50.7	584.1	846.1	667.1	645.3
Total[a]					
Export	3,720.0	6,150.0	8,460.0	7,810.0	6,210.0
Import	2,340.0	3,850.0	5,120.0	5,110.0	5,080.0

[a]Figure for 1971.
[b]Figure for 1978.
[c]Figure for 1982.
[d]Estimates from the Economists' Information Press.

SOURCES: U.N., *Yearbook of Statistics for Asia and the Pacific*, 1981 and 1983; EIU, *Yearbook of Energy, Far East and Australia, 1986/87.*

supplying Thailand and the Philippines with petroleum and this trade continues to the present, when there is a glut on the international market. This steady, long-term trade has benefited both sides.

China's petroleum is located mainly in the northern parts of the country. To meet the needs of the south, the petroleum has to be transported thousands of kilometres from the northern oilfields, placing a huge strain on the transport system. To relieve this, China adopts a flexible policy of importing crude through its southern ports to meet the needs of its southern refineries. Thus it has imported crude from the Middle East and Indonesia.

Singapore has a large refining capacity and an advanced processing technology, but has experienced a surplus of refining capacity since the beginning of the 1980s. The situation in China is just the reverse: crude oil processing levels are not high enough, resulting in higher yields of fuel oils and lower yields of light oils; quality is insufficient and product variety incomplete. China and Singapore thus started to develop their petroleum relations in 1984. China exports crude to Singapore for processing, and in 1987 Singapore processed 115,000 barrels of Chinese crude a day.

With the development of international co-operation in the exploitation of China's offshore petroleum resources, some ASEAN countries, particularly Singapore, have begun to participate in this endeavour. Singapore shipyards have built several mobile drilling rigs for China (Nanhai No. 1 and the Bohai Nos. 6, 8, and 10). Singapore shipyards also participated in bidding for Chinese contracts to supply a semi-submersible. Its oil service companies provide services to China's offshore industry in the form of equipment and spare parts.

Singapore companies have invested in China's offshore industry. For example, the Baomi Company joined with France's ELF in investing in the northern Wei 10–3 oilfield; Singapore companies also own shares in the Chiwan Petroleum Supply Base. Singapore and China have set up joint-venture companies, for example the China Nanhai Oxy-Sedco Drilling Corporation in Shekou, Shenzhen. China's contracting company has also joined international contracts to supply a mobile drilling rig to Malaysia.

3. Evaluation of China's Petroleum Trade with ASEAN

The entry of China's petroleum into the international market, and China's use of foreign investment in its petroleum industry, all signify its participation in international petroleum competition. In the authors' view, normal and reasonable competition is beneficial to the development of world trade. The Chinese Government advocates competition among enterprises within the country because it enhances economic efficiency and promotes development. In the international arena, the developing countries are at a competitive disadvantage and there is not too much difference in their competitive capacities. Their basic interests are the same, so though there is some competition among them, it ordinarily should not escalate into a trade war. Properly dealt with in a spirit of co-operation, it can become a beneficial factor for all parties. For example, the members of OPEC compete among themselves, but they have also worked closely together and won the support of other developing countries, and have had a great impact on the world economy.

The industrial countries of the developed world are different. With their high level of competitiveness, they often engage in trade conflicts. With their great advantage over developing countries, unfair situations of the strong bullying the weak and the large manipulating the small often arise. These stand in the way of the development of world trade as a whole, and particularly the trade of the developing countries.

With China's entry into the petroleum market of the Asia-Pacific region, and its attraction of foreign investment for its offshore petroleum industry, there is bound to be some competition between it and other oil producers, including those of the ASEAN region. However, China and the ASEAN countries are all developing countries with fundamentally identical interests, so any contradiction between them can be dealt with through co-operation. In order to further support this viewpoint, a country-by-country analysis is made of the structures of the oil exports of China and the ASEAN countries, and of the supply and demand in the Asia-Pacific region.

China and three ASEAN countries constitute the net exporters of crude petroleum in the region. The main importers of their crude are other countries of the region, especially the United States and Japan. In 1973, 72 per cent of Indonesia's crude went to countries of this region, 93 per cent of Brunei's, 98 per cent of Malaysia's, and 99.5 per cent of China's. In 1983, the figures were 66 per cent for Indonesia, 86 per cent for Brunei, 95 per cent for Malaysia, and 77 per cent for China.

At the time of the first oil crisis in 1973, 51.7 per cent of crude imports in the Asia-Pacific region came from the Middle East, with only 13.3 per cent produced within the region itself. Another 22.1 per cent came from the American continent. By 1983, when there was an oil glut, 47.0 per cent of crude imports came from the Middle East and 18.4 per cent were from the Asia-Pacific region's own exporters. These figures show that oil demand in the Asia-Pacific region was four times greater than the supply.

Japan and the United States are the principal importers of crude from China and the three ASEAN countries. In 1973, Japan and the United States imported respectively 45.9 and 35.0 per cent of total Asia-Pacific imports, which were 7.7 and 5.9 per cent respectively of world imports. In 1983, the figures were 40.1 and 38.6 per cent respectively of this region's imports, which were 9.7 and 9.3 per cent of world imports.

In 1983, 71.3 per cent of China's crude exports went to Japan, 42.4 per cent of Indonesia's, 47.2 per cent of Brunei's and 23.4 per cent of Malaysia's. Yet these figures represented respectively only 5.2, 14.5, 2.4, and 1.9 per cent of Japan's total imports. Imports from these four countries together only accounted for 24.1 per cent of Japan's total imports of crude, while 70.1 per cent came from the Middle East. Ten years earlier, in 1973, aggregate imports from these four countries by Japan came to 23.4 per cent of its total imports, while 71.7 per cent came from the Middle East. There had been little change in the 1973–83 decade.

In 1983, 2.9 per cent of China's crude exports went to the United States. For Indonesia, the figure was 25.2 per cent, for Brunei 12.7 per cent, and for Malaysia 2.5 per cent. These figures represented respectively 0.2, 11.3, 0.02, and 0.2 per cent of total American imports. The aggregate for these four countries only made up 11.8 per cent of total American imports, as compared with 30.5 per cent from Latin America and 14.7 per cent from the Middle East. In 1973, the four Asian countries' aggregate crude export to the United States accounted for only 5.4 per cent of American imports, as compared with 30.5 per cent from Latin America

and 18.6 per cent from the Middle East. The increase from the Asian countries in 1983 roughly made up for the decrease from the Middle East.

In conclusion, as far as the Asia-Pacific region is concerned, whether in the shortage years of the 1970s or the glut years of the 1980s, petroleum exports from China and the three ASEAN countries were a long way from satisfying the demands of the region. It would seem therefore that far from there being any "conflict" between China and the ASEAN exporters, there is instead a greater possibility of co-operation.

IV. China's Expanding Co-operation with ASEAN in the Petroleum Industry

1. Development Trends in the Asia-Pacific Petroleum Market

Any discussion of possibilities for future co-operation between China and ASEAN in the area of petroleum necessitates a prior analysis and projection of world market trends, particularly those of the Asia-Pacific region.

The sharp drop in world oil prices over the last few years has had some effect in stimulating consumption. However, many factors still exist which will cause the oil glut to continue. These include changes in technology, slow world economic growth, oil-saving measures already in effect, and the use of energy alternatives, such as natural gas, coal, and nuclear energy. Consequently, we do not foresee any marked lessening of the over-capacity of petroleum production. If petroleum producers can control their output, it is possible that the price per barrel will remain between US$18 and US$20 for the time being.

From a mid- to long-term viewpoint, we believe that world petroleum supply and demand will undergo some fairly big changes. The proportion of petroleum in world energy consumption has already dropped from 45 per cent in 1980 to 40 per cent in 1985, and by the year 2000, it will be only 30 per cent. The world is passing through a transitional stage in which many new kinds of energy are being used; however, petroleum will continue to be the main source in this century. Petroleum demand will grow only very slowly during this period, increasing by 20 to 30 per cent above present levels. However, before the end of this century, production patterns will change considerably: North Sea petroleum output will begin to fall in the 1990s, production in the Soviet Union and the United States will also decrease; and some Latin American countries hope to increase their output. In the decade of the 1990s to the end of the century, there will again be a shortage and a rise in oil prices.

For the Asia-Pacific region, the situation will be different. Petroleum development trends in this region are extremely important for exploring the possibilities of co-operation between China and ASEAN. At present, crude exports from the Asia-Pacific region account for less than 6 per cent of total world crude export trade while its imports are 24 per cent. In spite of the fact that 90 per cent of the region's exports are to countries within the region, they can satisfy only 22 per cent of their needs. The remaining 78 per cent must be imported from other

regions. The export of petroleum products from the Asia-Pacific region makes up only 15 per cent of total world crude export trade, while imports come to 22 per cent of world trade. Once again, although 75 per cent of petroleum product exports go to countries of the region, they can only fill 44 per cent of the region's demand. The remaining 56 per cent must come from other regions.

Japan and the United States are the largest importers in the Asia-Pacific region and the major petroleum trading partners of China and the three ASEAN petroleum exporters. It is thus important to study their current situation and future trends.

In 1973, Japan's energy structure was dominated by petroleum which accounted for 75.8 per cent; in 1980, this had dropped to 66.4 per cent, and by 1984 to 60 per cent. Over 99 per cent of Japan's petroleum is imported. A breakdown of its 215-million-ton import in 1984 shows that 20 per cent came from the three ASEAN exporters — 6 per cent from China, 65 per cent from the Middle East, and 4.3 per cent from Latin America. Although the proportion of oil in its energy structure will drop, perhaps even to 45 per cent in the year 2000, its absolute demand will continue to grow. Estimates place this rate of increase in the 1990s at 1.5 per cent annually, and it will continue to rely primarily on imports.

In 1973, the proportion of petroleum in American energy consumption patterns was 45.3 per cent. By 1984, this had dropped to 43 per cent. A breakdown of its 1984 import of 269 million tons shows that only 7 per cent came from Asian exporters, 42 per cent from Latin America, 14 per cent from Africa, 11.4 per cent from the Middle East, and 11.6 per cent from Canada. From a mid- to long-term point of view, the proportion of petroleum in American energy consumption will fall to an estimated 37 per cent in the year 2000, but demand in absolute terms will continue to increase from 715 million tons in 1984 to 800 million tons in the year 2000. A point worth noting is that American output of petroleum has been dropping, from 400 million tons in 1980 to 370 million tons in 1985, and perhaps to 335 million tons by the year 2000. If 800 million tons is taken as the overall need in 2000, then American imports of petroleum will have to increase from the 269 million tons in 1984 to 465 million tons.

The Asia-Pacific region has not been able to meet its demands for petroleum. In 1983, the four major exporters of this region (China and the three ASEAN countries) were only able to satisfy 23.39 per cent of Japan's needs and 5.44 per cent of the United States' needs. This situation is the basis for co-operation between China and ASEAN in the area of petroleum.

2. China-ASEAN Co-operation in the Petroleum Industry

The present world petroleum situation, the political instability and tensions in the Middle East, and the inability of the Asia-Pacific region to satisfy its petroleum needs for a long time to come all combine to cause the countries of the region serious concern over the steady supply of petroleum. China and ASEAN's petroleum exporters and importers are all taking positive steps to develop their respective petroleum industries. Present co-operation between China and certain

ASEAN countries, though still on a small scale, provides useful experience for future co-operation. China is maintaining its policy of opening to the outside world, and takes a positive view of international co-operation in petroleum. The foregoing points to the possibility of co-operation in the areas of petroleum prospecting, exploitation, contract services, processing, and trade so that the petroleum needs of the region can be met and supplies assured. We therefore make the following proposals:

(1) Current steady, long-term trade relations between China and some ASEAN countries have proved to be mutually beneficial and should be continued and strengthened. China's petroleum exports to three ASEAN countries is only a small proportion of their imports. For instance, in 1983, China's exports to the Philippines was only 5.57 per cent of its total petroleum imports; for Singapore, it was 0.53 per cent; and for Thailand, 1.77 per cent. In view of this, such petroleum trade could be expanded, given the proper conditions.

(2) China's co-operation with Singapore has not only overcome the problem of China's inadequate domestic refining capabilities, but has also benefited the Singapore economy. This oil processing service should continue and grow. Even more important in our view, is the fact that this form of complementing each other's needs could be used as a model for co-operation in other areas of the oil industry, for example oil transport, the construction and leasing of tankers and drilling rigs, oil extraction and supply of refinery equipment, information and data exchange, technology and manpower, etc.

(3) Indonesia is the only ASEAN petroleum exporter which is a member of OPEC. Although Brunei, Malaysia, and China have not joined the organization, they are all developing oil-exporting countries, and have the same basic interests as other such countries. They all wish to protect their rights and interests over their oil reserves, and maintain a reasonable level of earnings from their petroleum exports. China has all along been willing to work together with other developing oil exporters to co-ordinate action, and has actively supported the decisions taken by OPEC. China and the ASEAN oil exporters should increase contacts and co-ordination. There should be an exchange of information so that they can all respond better to the world oil market, and more specifically, the Asia-Pacific market.

(4) Both China and ASEAN are encouraging the exploitation of national petroleum reserves, particularly offshore ones. China's offshore oil industry has gotten off to a good start, but is still in its infancy and a long way from fulfilling the country's needs. Singapore's direct and indirect participation in China's offshore oil activities should continue and may even be intensified. China is also willing to co-operate with other ASEAN countries. China has already gradually established complete, technically advanced, and well-managed oil contracting services. These twenty specialized services, with 11,270 employees, have attained international standards and provide drilling, shipping, platform construction, transportation, and well logging and mud services for offshore oil exploration and extraction. There are also eleven joint-venture contracting services. In 1987,

China made great progress in self-funded prospecting in the Bohai-Liaodong and Shuibu Gulfs. In 1986, the Bohai Oil Corporation provided the manpower for jacket welding in Abu Dhabi, and gained a reputation for good work. In view of the above, it would be useful to explore the possibilities of China co-operating in ASEAN countries' oil exploitation when the need arises.

APPENDIX A5.1

Regulations of the People's Republic of China on the Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprises

Adopted at the Regular Session of the State Council on 12 January 1982; Promulgated by the State Council on January 30, 1982

Chapter I. General Principles

Article 1

In the interests of developing the national economy and expanding international economic and technological cooperation, these Regulations are formulated, on the premise of safeguarding national sovereignty and economic interests, to permit foreign enterprises to participate in the cooperative exploitation of offshore petroleum resources of the People's Republic of China.

Article 2

All petroleum resources in the internal waters, territorial sea and continental shelf of the People's Republic of China and in all sea areas within the limits of national jurisdiction over the maritime resources of the People's Republic of China are owned by the People's Republic of China.

In the sea areas referred to in the preceding paragraph, all buildings and structures set up and vessels operating to exploit petroleum, as well as the corresponding onshore oil (gas) terminals and bases, shall be under the jurisdiction of the People's Republic of China.

Article 3

The Government of the People's Republic of China shall protect, in accordance with the law, the investments of foreign enterprises participating in the coopera-

tive exploitation of offshore petroleum resources, the profits due to them and their other legitimate rights and interests, and shall protect, in accordance with the law, the cooperative exploitation activities of foreign enterprises.

All activities for the cooperative exploitation of offshore petroleum resources within the scope of these Regulations shall be subject to the laws and decrees of the People's Republic of China and relevant provisions of the State; all persons and enterprises taking part in petroleum operations shall be subject to the laws of China and shall accept inspection and supervision by the competent authorities concerned of the Chinese Government.

Article 4

The Ministry of Petroleum Industry of the People's Republic of China shall be the competent authority in charge of the exploitation of offshore petroleum resources in cooperation with foreign enterprises, and shall determine the forms of cooperation and demarcate areas of cooperation in accordance with the zones and the surface areas of cooperation designated by the State; it shall work out a plan for the exploitation of offshore petroleum resources in co-operation with the foreign enterprises in accordance with long-term state economic plans, formulate operation and management policies for the cooperative exploitation of offshore petroleum resources and examine and approve the overall development program for offshore oil (gas) fields.

Article 5

The China National Offshore Oil Corporation (CNOOC) shall have exclusive and overall responsibility for the work of exploiting offshore petroleum resources in the People's Republic of China in cooperation with foreign enterprises.

CNOOC shall be a state corporation with the qualifications of a judicial person and shall have the exclusive right to explore for, develop, produce and market the petroleum within the zones of cooperation with foreign enterprises.

CNOOC may, as the work requires, establish regional corporations, specialized corporations and overseas representatives offices to carry out the tasks delegated by the head office.

Article 6

CNOOC shall, by means of calling for bids and signing petroleum contracts, cooperate with foreign enterprises to exploit petroleum resources in accordance with the zones, surface areas and areas of cooperation with foreign enterprises for the exploitation of petroleum resources.

The petroleum contracts referred to in the preceding paragraph shall come into force after approval by the Foreign Investment Commission of the People's Republic of China.

All documents signed by CNOOC for other forms of cooperative exploitation of petroleum resources utilizing technology and funds provided by foreign enterprises shall also be subject to approval by the Foreign Investment Commission of the People's Republic of China.

Chapter II. Rights and Obligations of the Parties to Petroleum Contracts

Article 7

CNOOC shall cooperate with foreign enterprises to exploit offshore petroleum resources by means of entering into petroleum contracts, and, unless otherwise specified by the Ministry of Petroleum Industry or in a petroleum contract, the foreign enterprise that is one party to the petroleum contract, (hereafter "foreign contractor") shall provide the investment to carry out exploration, be responsible for exploration operations and bear all exploration risks after a commercial oil (gas) field is discovered, both the foreign contractor and CNOOC shall provide the investment for its cooperative development, and the foreign contractor shall be responsible for the development operations and production operations until CNOOC takes over the production operations when conditions permit as provided in the petroleum contract. The foreign contractor, in accordance with the provisions of the petroleum contract, may recover its investment and expenses and receive remuneration out of the petroleum produced.

Article 8

The foreign contractor may export the petroleum due to it and the petroleum it purchases, and may also remit abroad, in accordance with the law, the investment it recovers, its profits and its other legitimate income.

Article 9

All Chinese enterprises and foreign enterprises participating in the cooperative exploitation of offshore petroleum resources shall pay taxes in accordance with the law and shall pay mining royalties.

All employees of the enterprises referred to in the preceding paragraph shall pay individual income tax in accordance with the law.

Article 10

The equipment and material imported for carrying out the petroleum contract shall be subject to tax at a reduced rate, or exempted from tax, or given other preferential tax treatment in accordance with State provisions.

Article 11

The foreign contractor shall open a bank account in accordance with the provisions of the Provisional Regulations on Foreign Exchange Control of the People's Republic of China.

Article 12

In carrying out the petroleum contract, the foreign contractor shall use appropriate and advanced technology and management experience and shall be obliged to transfer the technology and pass on the experience to the personnel of the Chinese side involved in carrying out the petroleum contract (hereafter "Chinese personnel"); in petroleum operations, the foreign contractor must give preference in employment to Chinese personnel, progressively increase the percentage of Chinese personnel and train Chinese personnel in a planned way.

Article 13

In carrying out the petroleum contract, the foreign contractor must promptly and accurately report to CNOOC on the situation of petroleum operations; and it must acquire complete and accurate data, records, samples, vouchers and other original data with respect to various aspects of the petroleum operation, and regularly submit to CNOOC necessary data and samples as well as various technological, economic, financial and accounting, and administrative reports.

Article 14

In carrying out the petroleum contract, the foreign contractor shall establish a branch or subsidiary or representative office within the territory of the People's Republic of China and fulfil registration formalities in accordance with the law.

The domiciles of the offices referred to in the preceding paragraph shall be determined through consultation with CNOOC.

Article 15

The provisions of Articles 3, 8, 9, 10 and 14 of these Regulations shall apply, by analogy, to foreign subcontractors that render services in connection with the petroleum operations.

Chapter III. Petroleum Operations

Article 16

In order to achieve the highest possible oil recovery factor, the operator must, in accordance with these Regulations and the relevant provisions promulgated by the Ministry of Petroleum Industry on the exploitation of petroleum resources and by taking account of international practice, formulate an overall development program for the oil (gas) field and implement production operations.

Article 17

In carrying out the petroleum contract, the foreign contractor shall use the existing bases within the territory of the People's Republic of China, and, if new bases are needed, they must be established within the territory of the People's Republic of China.

The specific locations of the new bases referred to in the preceding paragraph, and other arrangements that may be necessary in special circumstances, must all be subject to the written approval of CNOOC.

Article 18

CNOOC shall have the right to send personnel to join the foreign operator in making master designs and engineering designs for carrying out the petroleum contract. Design corporations within the territory of the People's Republic of China shall have priority in entering into subcontracts for the master designs and engineering designs mentioned above, provided that their terms are competitive.

Article 19

With respect to all facilities required to be built in carrying out the petroleum contract, including artificial islands, platforms, buildings and structures, when

signing subcontracts, the operator must give preference to manufacturing plants and engineering corporations within the territory of the People's Republic of China, provided that they are competitive in terms of quality, price, term of delivery and services.

Article 20

With respect to the equipment and materials required to carry out the petroleum contract, the operator and subcontractors must give preference to procuring and utilizing equipment and materials manufactured and supplied by the People's Republic of China, provided that these are competitive.

Article 21

With respect to services that are required to carry out the petroleum contract, such as those for geophysical prospecting, well-drilling, diving, aircraft, ships and bases, the operator and subcontractors must enter into subcontracts and service contracts with relevant departments within the territory of the People's Republic of China, provided that they are competitive in terms of price, efficiency and services.

Article 22

The ownership of all assets purchased or built by the foreign contractor to carry out the petroleum contract in accordance with the plan and budget, excluding equipment leased from a third party, shall belong to CNOOC after the foreign contractor's investment has been compensated as provided for, and, within the term of the contract, the foreign contractor may continue to use those assets in accordance with provisions of the contract.

Article 23

CNOOC shall have the ownership of all of the data, records, samples, vouchers and other original data with respect to the petroleum operations stipulated in Article 13 of these Regulations.

The utilization and transfer, donation, exchange, sale and publication of the previously mentioned data, records, samples, vouchers and other original data and their export and transmission from the People's Republic of China all must be conducted in accordance with the "Provisions for the Control of Data" formulated by the Ministry of Petroleum Industry.

Article 24

In the course of implementing petroleum operations, the operator and subcontractors shall comply with the relevant laws and provisions on environmental protection and safety of the People's Republic of China, and shall, by taking account of international practice when conducting operations, protect fishery resources and other natural resources and prevent the environment, including the air, sea, rivers, lakes and land, from being polluted or damaged.

Article 25

The petroleum produced within the petroleum contract area shall be landed in the People's Republic of China or may be exported from oil (gas) metering points on offshore terminals. In case such petroleum has to be landed at a point outside the People's Republic of China, the approval of the Ministry of Petroleum Industry must be obtained.

Article 26

In case of war, threat of war or other state of emergency, the Chinese Government shall have the right of compulsory purchase or requisition with respect to a portion or all of the petroleum earned or purchased by the foreign contractor.

Chapter IV. Supplementary Principles

Article 27

Any dispute arising between foreign and Chinese enterprises during the cooperative exploitation of offshore petroleum resources shall be settled through friendly consultations. If it cannot be resolved through consultation, mediation and arbitration may be conducted by an arbitration body of the People's Republic of China, or the parties to the contract may agree upon arbitration by another arbitration body.

Article 28

In case an operator or subcontractor violates the provisions of these Regulations in implementing petroleum operations, the Ministry of Petroleum Industry shall have the right to issue a warning and set a deadline for correction. If no

correction can be made prior to the specified deadline, the Ministry of Petroleum Industry shall have the right to adopt necessary measures, even to the extent of suspending implementation of petroleum operation. All economic losses caused as a result of this shall be borne by the responsibile party.

A party responsible for serious violation of these Regulations may be fined by and/or even be subject to suit before the judicial authorities by the Ministry of Petroleum Industry.

Article 29

The terms used in these Regulations shall have the following definitions:

(1) "Petroleum" means crude oil or natural gas deposited underground, currently being extracted or already extracted.

(2) "Exploitation" means, in general, the exploration for the development, production and marketing of petroleum, as well as other related activities.

(3) "Petroleum contract" means a contract signed, in accordance with the law, between CNOOC and foreign enterprises for the cooperative exploitation of offshore petroleum resources of the People's Republic of China, including the exploration for and development and production of petroleum.

(4) "Contract area" means a surface area designated within a sea area demarcated by geographical coordinates in the petroleum contract for the cooperative exploitation of petroleum resources.

(5) "Petroleum operation" means all exploration, development and production operations and other related activities conducted in carrying out the petroleum contract.

(6) "Exploration operations" means all work done to locate the petroleum-bearing traps by means of geological, geophysical and geochemical methods and including drilling exploratory wells, etc., and all work done to determine the commerciality of discovered petroleum traps, including appraisal drilling, feasibility studies and preparation of the overall development program for an oil (gas) field.

(7) "Development operations" means projects, such as those for design, construction, installation and drilling, and corresponding research work, conducted from the date of the approval of the overall development program for an oil (gas) field by the Ministry of Petroleum Industry, in order to bring about petroleum production, including production activities carried out before the commencement of commercial production.

(8) "Production operations" means all operations for producing petroleum conducted after the date of commencement of the commercial production of an oil (gas) field and related activities, such as extraction, injection, production

stimulation, processing, storage and transportation and lifting of petroleum and other operations.

(9) "Foreign contractor" means a foreign enterprise that signs a petroleum contract with CNOOC. The foreign enterprises may be a corporation or a consortium of corporations.

(10) "Operator" means an entity that is responsible for implementing the operations pursuant to the provisions of the petroleum contract.

(11) "Subcontractor" means an entity that renders services to the operator.

Article 30

Rules for the implementation of these Regulations shall be formulated by the Ministry of Petroleum Industry.

Article 31

These Regulations shall go into effect on the date of promulgation.

SOURCE: China Prospect Publishing House, *Collection of Laws and Regulations of the People's Republic of China Concerning Foreign Economic Affairs*, vol. 2 (Beijing, 1985).

NOTES

1. *Petroleum Economist*, November 1987, p. 407.
2. One kilogram of standard fuel gives 7,000 KCal. One kilogram of coal gives an average of 5,000 KCal or the equivalent of 0.7143 kilograms of standard fuel. Every kilogram of crude oil is reckoned as 10,000 KCal, which converts to 1.4286 kilograms of standard fuel. One cubic meter of natural gas, at 9,310 KCal converts to 1.33 kilograms of standard fuel. Hydroelectricity is calculated on the basis of the consumption of coal-generated electricity for that particular year.
3. *China Oil Quarterly* (Hong Kong), (Summer 1987), p. 109.
4. *Guangming Daily* (Beijing), 30 December 1987.

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6

Development of the ASEAN Textile and Garment Industry and Implications for ASEAN-China Economic Relations

Emmanuel T. Velasco

I. Introduction

1. Objectives of the Study

The textile and garment industry is one sector where developing countries have successfully competed with industrial countries. Over the past decade, the rapid increase in the production capacities of ASEAN countries has placed the region in the same league as the major producers and exporters of the industry. The industry plays an important role in the economies of the ASEAN members, except possibly for Singapore. Undeniably, textiles offer vast potentials for improving the capacity of each country to earn foreign exchange. However, the rapid expansion of trade has been held back by the growing protectionism of industrialized countries, such that textiles is now probably the most regulated item in international trade.

While the issue of protectionism has caused much concern, many foresee that the ASEAN textile industry will be affected by another development. This is China's recent emergence as a major exporter of textiles and clothing. Although the world's largest, the Chinese textile industry has remained inward-looking for many years. More active involvement by China in world trade, particularly in textiles, is viewed as a threat by many producers in the ASEAN region.

This paper attempts to analyze the impact of this recent development on the ASEAN textile industry and on ASEAN-China economic relations. The specific objectives of this paper are as follows:

1. To analyze the structure of the industry and the pattern of its development in the ASEAN region;
2. To identify the problems of the industry and to assess possibilities for the future; and
3. To evaluate the impact of China's emergence as a major exporter of textiles on the ASEAN textile industry and on ASEAN-China economic relations.

2. Scope and Limitations

The textile industry, as referred to in this study, comprises two separate industries: textiles (namely fibres, yarns, fabrics, and other products such as thread, twine, net, and cordage) and garments (namely wearing apparel and accessories).

The study covers all the activities involved in the processing of fibres into finished goods. These activities are: (1) spinning; (2) weaving/knitting; (3) finishing; and (4) manufacture of garments from the finished fabrics. In addition, only five ASEAN countries are reviewed, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

This study is limited by the lack of comprehensive, consistent, and up-to-date data. Data were obtained from several sources. In several cases, it was not possible to compute consolidated figures for the region either because of lack of uniformity of data or because of differences in the level of disaggregation.

II. Structure of the Textile Industry

1. Industry Background

The textile industry was among the first industries to be promoted when the ASEAN countries embarked on their industrialization programmes. Its labour intensiveness and its use of standardized and less sophisticated technology made the industry appropriate for developing countries, where labour is cheap but capital is scarce. Furthermore, as the products of the industry were basic necessities, marketing was assured.

At first, the industry served only the domestic market, in conformity with the import substitution industrialization strategy. With the help of government incentives and foreign capital, industry growth was bolstered. As foreign investments in the industry increased, more sophisticated technology was introduced and operations expanded. The products also started to be exported to the international market.

With the saturation of the domestic market, expansion of exports became the goal. This shift in the direction of the industry was consistent with the change in the overall strategy for industrialization. Recognizing the limitations of import substitution, the ASEAN countries began shifting to export promotion. The garment industry was, in fact, developed in most ASEAN countries increasingly as an export-oriented industry.

Today, the textile and garment industries in the ASEAN region are moving towards integration and further expansion of exports. Although these industries generally developed in similar fashion, they now differ in status in each country. This is not only because the industries were established in different time periods but because different incentives and economic policies shaped their development.

2. Importance of the Industry to ASEAN Countries

The textile industry occupies a major place in the manufacturing sector of each ASEAN country. Textiles and garments contribute a substantial share of value added, employment, and exports of the sector. The relative shares, however, differ between countries (Table 6.1).

Thailand's textile industry has the highest share, accounting for almost one-fourth of manufacturing value added. In the other ASEAN countries, the industry's share is much smaller. In Indonesia, the share is 12.7 per cent; in the Philippines 9.4 per cent; in Malaysia 4.8 per cent (of output valued); and in Singapore, only 3.8 per cent of manufacturing value added.

When employment in the industry is examined, its share of manufacturing employment exceeds 20 per cent in three countries — Thailand (29.4 per cent), followed by the Philippines (26.3 per cent), and Indonesia (23.1 per cent). The industry accounts for 12 per cent of manufacturing employment in Singapore and Malaysia.

In Thailand and the Philippines, textiles and garments are now the leading non-agricultural exports, accounting for 11 and 19.6 per cent of total country exports, respectively. These shares are higher in comparison with those in other ASEAN countries. Textile export earnings as a proportion of total exports are significantly lower in Malaysia and Singapore and lowest in Indonesia. The small 3 per cent share in Indonesia is explained by the fact that the industry is basically oriented to domestic needs.

From the foregoing performance indicators, it is evident that the industry occupies a leading position in Thailand. It is also important in the Philippines and Indonesia, and less important in Malaysia. It has become less significant in Singapore. The declining share of the industry in Singapore indicates that the country is now moving away from textiles. The high cost of labour is making the country less competitive in textiles. Singapore, which has already attained a more advanced stage of industrialization, should be considered apart from other ASEAN countries.

3. Profile of the Industry

Number and Size of Establishments

Table 6.2 shows the number of textile establishments in the region. The figures cannot be consolidated for lack of data uniformity, hence intra-regional comparison is not possible. Only patterns of growth can be compared across countries.

As a whole, while the 1970s saw an increase in the number of textile establishments, the 1980s were marked by a general decline. The decrease was an expected outcome of industrial progress and technological improvements. Smaller, inefficient firms were forced to close down as other firms expanded or merged into larger, more efficient firms.

TABLE 6.1
Textile Industry: Value Added, Employment, and Exports, 1985

Country/Category	Value Added	Number Employed	Exports (Value in US$ thousand)
Indonesia[a]	(Rp thousand at market prices)		
Textile manufactures	573,762 (1984)	240,393 (1984)	228,602
Wearing apparel	71,686 (1984)	35,874 (1984)	323,910
Total textile and wearing apparel	645,448 (1984)	276,267 (1984)	552,512
Total manufacturing	5,091,040 (1984)	1,197,799 (1984)	18,448,000
Malaysia			
Textile manufactures	n.a.	33,102 (1983)	211,930
Wearing apparel	n.a.	27,681 (1983)	315,357
Total textile and wearing apparel	n.a.	60,783 (1983)	527,287
Total manufacturing	n.a.	493,158 (1983)	15,436,506
Philippines	(₱ million at 1972 prices)		
Textile manufactures	734	135,486 (1981)	70,276
Wearing apparel and footwear	1,297	153,484 (1981)	263,198
Total textiles and wearing apparel	2,031	288,970 (1981)	334,194
Total manufacturing	21,625	1,097,868 (1981)	4,628,954

Singapore[b]	(S$ thousand at current market prices)		
Textile manufactures	62,442	2,744	353,100
Wearing apparel	345,663	24,782	534,700
Total textile and wearing apparel	408,105	27,526	887,800
Total manufacturing	10,687,326	253,510	22,806,500
Thailand[c]	(B million at 1972 prices)		
Textile manufactures	n.a.	177,895 (1983)	19,000
Wearing apparel	n.a.	363,984 (1983)	810,300
Total textile and wearing apparel	18,931 (1984)	541,879 (1983)	829,300
Total manufacturing	72,252 (1984)	1,843,000 (1983)	7,413,000

[a]Data for Indonesia are for large and medium establishments only.
[b]Data for Singapore's textile exports are from the *Yearbook of Statistics*, Department of Statistics.
[c]Data for Thailand's textile exports are from *The Bank of Thailand Quarterly Bulletin*, Department of Economic Research.

SOURCES: Indonesia: Central Bureau of Statistics, *Statistical Yearbook of Indonesia*; Malaysia: Department of Statistics, *Yearbook of Statistics*; Philippines: National Census and Statistics Office, *Philippine Statistical Yearbook*; Singapore: Department of Statistics, *Report on the Census of Industrial Production*; and Thailand: Research Division, The Thai Textile Manufacturing Association.

TABLE 6.2
Number of Textile Establishments, 1975, 1980, and 1985

Country	1975	1980		1985	
Indonesia (only large and medium-scale establishments)					
Textile manufactures	2,754	1,957		1,720	
Garments (except footwear)	84	134		334	
Total	2,838	2,091		2,054	
Malaysia					
Textile products	135	254	(1979)	211	(1983)
Garments	144	187	(1979)	213	(1983)
Total	279	441	(1979)	424	(1983)
Philippines (only establishments with 5 or more workers; garments include footwear)					
Textile products	3,514	4,470		4,471	(1981)
Garments	29,479	29,543		19,559	(1981)
Total	32,993	34,013		24,030	(1981)
Singapore					
Textile products	72	99		62	
Garments	257	374		370	
Total	329	473		432	
Thailand					
Textile products	n.a.	n.a.		1,237	(1984)
Garments	n.a.	n.a.		600	(1984)
Total	n.a.	n.a.		1,837	(1984)

SOURCES: Same as for Table 6.1.

There is a greater proportion of garment than textile firms in the Philippines and Singapore. The opposite is true in Indonesia and Thailand. In Malaysia, firms are almost equally divided between the two industries.

Within the textile sector, there are more establishments at the midstream of the production process than at the initial stage where raw materials are produced. In the Philippines, for example, while many firms produce fabrics and garments, only one firm produces polyester staple fibre. Yet this fibre accounts for 60 per cent of the total raw materials used in the manufacture of fabrics. A similar situation exists in Indonesia, where there are only two firms producing nylon filament yarn and four firms producing polyester staple fibres. Thus, the industry remains heavily dependent on imported raw materials to supplement the limited local supply. This significantly increases the cost of production.

Smaller firms outnumber the larger firms in the textile industry. As of 1985, approximately 61.3 per cent of the firms in the textile industry of Singapore employed only 10 to 29 workers, and 75.2 per cent of all textile firms had fewer than 50 workers. In the Philippines, about 36 per cent of textile firms employ

TABLE 6.3
Average Employment, Fixed Assets, and Output per Establishment in the Textile Industry

	Average Number of Workers per Establishment	Average Value of Output per Establishment	Average Value of Fixed Assets per Establishment
Indonesia (1984)		(Rp million)	
Textiles	144	994.7	n.a.
Garments	173	816.9	n.a.
Total textiles and garments	147	975.1	n.a.
Manufacturing	150	1,825.4	n.a.
Malaysia (1983)		(M$ million)	(M$ million)
Textiles	157	6.12	2.87
Garments	130	2.58	0.67
Total textiles and garments	143	4.34	1.76
Manufacturing	84	7.03	2.68
Philippines (1981)		(₱ million)	(₱ million)
Textiles	30	2.18	1.52
Garments	5	.20	0.04
Total textiles and garments	9	.47	0.24
Manufacturing	13	1.65	0.54
Singapore (1985)		(S$ million)	
Textiles	44	3.12	n.a.
Garments	67	2.80	n.a.
Total textiles and garments	64	2.84	n.a.
Manufacturing	72	10.99	n.a.

SOURCES: Same as for Table 6.1.

fewer than 100 workers, with 21 per cent of these having fewer than 50 workers; only 12 per cent employ at least a thousand workers.

Comparing textile manufacturers and garment producers, the latter are smaller in size, as evident in Table 6.3. The large capital investments required for textile manufactures demand a bigger scale of operations for economies of scale.

Concentration and Vertical Integration

Despite the existence of a large number of textile firms, concentration of production in a few large firms is common in the ASEAN region. Malaysia has

the highest degree of concentration in both spinning and weaving. Thailand has high concentration in spinning, while the Philippines has high concentration in the weaving sector. Indonesia has the lowest concentration in both sectors. Although no updated figures are available, the decrease in the number of firms through the closure of smaller, inefficient firms could have led to greater concentration of production in the larger, more efficient firms.

The ASEAN textile industry is also characterized by vertical integration in the production process. Its firms perform several production activities, instead of engaging exclusively in a specific activity. In the Philippines, integrated mills hold 56 per cent of spindle capacity, 63 per cent of loom capacity, and 86 per cent of total finishing capacity. Furthermore, in Thailand, integrated mills account for 78.1 per cent of total spinning production capacity and 63.6 per cent of the number of spinning machines.

Concentration and integration are not unique to the ASEAN textile industry. These are also common in developed countries where concentration is more intense in fibre production than in textiles. In 1979, only twelve companies accounted for almost 60 per cent of world fibre production and 80 to 90 per cent of world trade in these fibres.

Several factors contributed to the development of this type of industry structure. Technical progress is one major factor. In textile production, the development of machines that run faster and permit longer production runs encouraged smaller firms to merge for greater efficiency. Another factor is the increased use of synthetic fibres which led to greater vertical integration. Modern firms which initially produced pure man-made fibres or cotton blends and synthetic fibres were mostly integrated and performed spinning to weaving or even up to finishing. Finally, increasing costs of product research and development and production contribute further to concentration and integration of the industry.

Foreign Investments

Foreign participation in the ASEAN textile industry has been very substantial due to the member countries' policy of encouraging foreign investments and the developed nations' shift of production to developing countries to reduce production costs.

In Thailand, there are only three major groups of textile companies: Thai, Japanese, and Thai-Taiwanese. Japanese participation has been particularly large, especially between 1960 to 1976. Foreign investments are likewise a significant source of capital in Indonesia. It accounted for 70 per cent of total investments in the textile industry from 1968 to 1975. In Malaysia, foreign capital accounts for a smaller portion of investments in the industry, but firms wholly owned by Malaysians are much smaller than those with foreign participation.

In Singapore, wholly owned foreign firms comprise 8 per cent of all textile firms and only 3 per cent of garment firms. However, if all firms with foreign equity were considered, then the proportion with foreign participation increases to 32.3 per cent of the textile firms and 20 per cent of the garment firms. The foreign capital in the industry comes from Hong Kong, Malaysia, Taiwan, Japan,

Switzerland, and the United States. Finally, in the Philippine garment sector, foreign ownership is estimated at 45 per cent, with the investment mainly from Japan, the United States, and Taiwan.

Foreign investments in the region's textile industry have led to the transfer of technology and established marketing channels which have enabled the host countries to penetrate the international market. Furthermore, the presence of foreign investments has also contributed to the duality of the industry structure. Firms with foreign capital are generally larger, vertically integrated, and export-oriented. They co-exist with smaller or medium-sized local enterprises producing mainly for the domestic market.

III. Development Patterns of the Textile Industry

1. Production

When the textile capacities of individual countries are combined, the ASEAN region emerges as one of the major producers of textiles and garments. As of 1981, the region had over 6 million spindles, 185 thousand looms, and 53 thousand knitting machines. However, the total number of textile equipment may not be an accurate gauge of production capacity as most of the equipment may be old and obsolete.

Table 6.4 shows ASEAN production of yarn, fabrics, and man-made fibres in 1981. Indonesia leads the other countries in the production of fibres and fabrics and is second to Thailand in the production of yarn. The Philippines is third in the production of all three, while Singapore and Malaysia lag behind.

TABLE 6.4
Textiles and Man-Made Fibre Production, 1981

Item	Indonesia	Malaysia	Philippines	Singapore	Thailand
Textiles					
All yarns ('000 tons)	224	57	145	18	234
All fabrics (million sq. m.)	2,094	250	668	40	1,879
Man-Made Fibres					
Rayon and acetate ('000 tons)	16	—	—	n.a.	16
Non-cellulosics ('000 tons)	112	34	41	n.a.	102

SOURCES: The Economist Intelligence Unit (EIU), *World Textile Trade and Production Trends*, Special Report No. 152, 1983; Directorate-General of Assorted Industries, Indonesia; Thai Textile Manufacturing Association, Bangkok; and Textile Manufacturers Association of the Philippines.

TABLE 6.5
Trends in Fibre Use by Mills, 1974–81
(In '000 tons)

Country	1974	1975	1977	1979	1981
Indonesia					
Cotton	56	65	80	92	105
Rayon/Acetate	1	9	22	28	32
Synthetics	76	96	116	97	137
Total	133	170	218	217	274
Malaysia					
Cotton	43	51	55	60	54
Rayon/Acetate	2	3	3	3	38
Synthetics	9	14	38	44	64
Total	54	68	96	107	156
Philippines					
Cotton	34	31	26	30	27
Rayon/Acetate	16	16	23	9	22
Synthetics	34	45	64	61	70
Total	84	92	113	100	119
Thailand					
Cotton	82	84	103	118	135
Rayon/Acetate	5	4	13	17	18
Synthetics	47	45	70	89	111
Total	134	133	186	224	264
ASEAN Total					
Cotton	215	231	264	300	321
Rayon/Acetate	25	32	61	57	110
Synthetics	166	200	288	291	382
Total	406	463	613	648	813

SOURCE: EIU, *World Textile Trade and Production Trends*, Special Report No. 152, 1983.

The rapid expansion of the textile industry in the ASEAN region can be seen from the doubling of fibre consumption by the textile mills (Table 6.5). Total fibre consumption in the region increased by 100 per cent between 1974 and 1981. Fibre consumption is highest in Indonesia and Thailand. Malaysia's textile mills, on the other hand, have increased their fibre consumption the fastest.

There has been a clear shift from cotton to man-made fibres in ASEAN. In 1974, cotton fibres made up 53 per cent of total fibre consumption. Cotton fibre consumption subsequently increased by only 49.3 per cent, while the consumption of rayon/acetate and synthetic grew by 340 and 130 per cent respectively. By 1981, cotton fibre consumption was down to only 39.5 per cent of total fibre consumption.

TABLE 6.6
Indonesia: Textile Production, Production Capacity, and Capacity Utilization, 1970–84

Textile Products	1970	1975	1982	1984
Actual Production				
Cotton fibre (tons)	n.a.	n.a.	14,294.0	71,292.0
Synthetic fibre (tons)	n.a.	47,720.0	132,397.0	174,640.0
Yarn (thousand bales)	182.1	364.0	1,370.0	1,876.8
Fabrics (million metres)	449.4	973.9	1,708.9	1,190.7
Garments (million dozens)	6.8	12.6	21.1	24.1
Production Capacity				
Synthetic fibre (tons)	n.a.	47,720.0	132,397.0	174,640.0
Polyester fibre - staple and filament (tons)	n.a.	n.a.	105,550	173,750.0
Rayon (tons)	n.a.	n.a.	36,000	36,000.0
Yarn (thousand bales)	n.a.	678.0	1,450.6	1,638.6
Fabrics (million metres)	n.a.	n.a.	2,136.0	2,620.0
Garments (million dozens)	n.a.	14.1	20.3	24.7
Capacity Utilization (%)				
Synthetic fibres	n.a.	n.a.	n.a.	88.8
Yarn	n.a.	53.7	94.4	114.5
Fabrics	n.a.	n.a.	80.0	45.4
Garments	n.a.	89.4	104.4	97.6

SOURCE: Directorate-General of Assorted Industries, Indonesia.

Table 6.6 shows the rapid expansion of the textile and garment industry in Indonesia. Stimulated by a large domestic market and increasing penetration of the overseas market, production of textiles and garments grew at unprecedented rates from 1970 to 1982. Cotton fibre production stands out for the three-fold increase in output during the 1980s. The capacity utilization rate for fabrics fell below 50 per cent in 1985; for the rest of the products, capacity utilization rates are very high: 114.5 per cent for yarn and 97.6 per cent for garments.

Thailand's level of production is slightly lower than that of Indonesia (Table 6.7). The two countries however exhibit very similar patterns of growth. Rapid increases were experienced until 1980, after which the growth rate slowed down. Synthetic fibres began to be produced only in the early 1970s while the production of both cotton and man-made yarns consistently increased, with the rate of man-made yarns rising faster than that for cotton. As of 1983, capacity utilization rates for all types of products were more than 80 per cent. Textile production continued to increase after 1983, by 5.6 per cent in 1984, and by 4.7 per cent in 1985.

In contrast, the Philippine textile industry performed very poorly during the 1980s (Table 6.8). Textile production increased at reasonably high rates until

TABLE 6.7
Thailand: Textile Production, Production Capacity, and Capacity Utilization, 1970-84

Textile Products	1970	1975	1980	1984	
Actual Production					
Cotton (tons)	13,743	18,752	57,724	43,960	(1983)
Man-made fibres (tons)	n.a.	39,006	103,159	115,159	
Polyester staple	n.a.	n.a.	49,514	57,323	
Polyester filament yarn	n.a.	n.a.	19,677	17,386	
Partially-oriented yarn	n.a.	n.a.	857	5,167	
Nylon filament yarn	n.a.	n.a.	16,716	16,413	
Viscose rayon yarn	n.a.	n.a.	16,395	18,870	
Yarn (tons)	56,846	135,122	227,485	247,166	(1983)
Cotton	49,365	70,502	96,151	109,687	(1983)
Man-made	7,481	64,620	131,334	137,479	(1983)
Fabrics (thousand sq. m.)	416,336	942,832	1,523,506	1,841,910	(1983)
Cotton	325,609	506,204	701,192	816,032	(1983)
Man-made	90,727	436,628	822,314	1,025,878	(1983)
Production Capacity					
Man-made fibres (tons)	n.a.	n.a.	113,520	128,040	
Polyester staple	n.a.	n.a.	49,200	62,400	
Polyester filament yarn	n.a.	n.a.	28,800	24,120	
Partially-oriented yarn	n.a.	n.a.	2,400	4,800	
Nylon filament yarn	n.a.	n.a.	15,120	18,720	
Viscose rayon yarn	n.a.	n.a.	18,000	18,000	
Yarn (tons)	n.a.	n.a.	n.a.	287,687	(1983)
Fabrics (thousand sq. m.)	n.a.	n.a.	n.a.	2,219,846	(1983)
Capacity Utilization					
Man-made fibres	n.a.	n.a.	90.9	89.9	
Polyester staple	n.a.	n.a.	100.6	91.9	
Polyester filament yarn	n.a.	n.a.	68.3	49.8	
Partially-oriented yarn	n.a.	n.a.	35.7	107.6	
Nylon filament yarn	n.a.	n.a.	110.6	87.7	
Viscose rayon yarn	n.a.	n.a.	91.1	104.8	
Yarn	n.a.	n.a.	n.a.	85.9	(1983)
Fabrics	n.a.	n.a.	n.a.	83.0	(1983)

SOURCE: Research Division, The Thai Textile Manufacturing Association.

1970, but then, with the exception of knitted fabrics, started to fall during the first half of the seventies and only to recover during the second half. However, the production of cotton fibres continued to drop. The textile crisis became more obvious in the 1980s with a decrease in production of 29.3 per cent from 1980 to 1984. In a survey of the industry conducted by the Philippine Institute for

TABLE 6.8
Philippines: Textile Production, 1965–84

Textile Products	1965	1970	1975	1980	1984
Cotton yarn (tons)	16,478	41,916	35,675	38,433	n.a.
Cotton fabrics (thousand metres)	162,708	212,905	209,143	166,183	n.a.
Knitted fabrics (tons)	4,251	8,431	11,687	17,765	n.a.
Fabrics, threads, and other yarns (metric tons)				105,000	74,269

SOURCES: *Philippine Statistical Yearbook* and Inorganic Chemical Industries Department, Board of Investments (ICID-BOI). As quoted in Tariff Commission - PIDS Joint Research Project, Staff Paper Series No. 86¢14.

TABLE 6.9
ASEAN Share of World Cotton Yarn and Synthetic Fibre Production, 1970, 1975, and 1980
(In percentage)

	Cotton Yarn Production			Synthetic Fibre Production		
	1970	1975	1980	1970	1975	1980
World Total	100.0	100.0	100.0	100.0	100.0	100.0
Asian NIEs	4.2	4.7	6.6	2.9	6.9	10.4
ASEAN	1.4	1.7	2.0	0.4	0.9	2.5
Indonesia	0.4	0.7	0.8	n.a.	0.1	0.9
Malaysia	n.a.	n.a.	n.a.	n.a.	*	0.3
Philippines	0.5	0.3	0.3	0.1	0.3	0.4
Thailand	0.5	0.7	0.9	0.3	0.5	0.9

*Less than 0.1 per cent.

SOURCE: Pacific Basin Economic Council and the Japan National Committee, *Pacific Economic Community Statistics, 1984.*

Development Studies and the Tariff Commission, it was reported that capacity utilization rates continued to slide from 65 per cent in 1980, down to 58 per cent in 1984, and to 50 per cent in 1985.

Although textile production in the ASEAN region is still only a small part of world production, the region's share has been increasing. Table 6.9 shows the share of ASEAN and its member countries in the world production of cotton yarn and synthetic fibre. The ASEAN production has grown more than eight times faster than the world production. Also, as compared with the Asian newly industrializing economies (NIEs), ASEAN has experienced substantial growth in the production of synthetic fibres rather than in cotton fibre.

Indonesia and Thailand lead the region in the production of both cotton yarn and synthetic fibres. In the case of the Philippines, the production of cotton yarn has undeniably contracted. Subsequently, Thailand and Indonesia increased their production more rapidly such that in 1980, their shares were already more than double that of the Philippines.

The shift of production from cotton to synthetics is a phenomenon observed not only in the ASEAN region but also world-wide. Changes in relative prices, end users, and product innovations are among the reasons. Since the introduction of synthetic fibres in the 1950s, prices have considerably dropped. In 1981, the world price of cotton was 6 per cent higher than that of polyester fibre.

2. International Trade in Textiles and Garments

All the five ASEAN countries have become net exporters of textiles and garments. The trade surplus is largest in Thailand with an export/import ratio of 1.94, Philippines (1.53), Indonesia (1.36), Malaysia (1.23), and Singapore having the least (1.04). The net trade surplus of the region in textiles amounted to US$559 million in 1985 (Table 6.10).

TABLE 6.10
ASEAN: Textile and Garment Export-Import Ratios, 1970, and 1980–85

Year	Indonesia	Malaysia	Philippines	Singapore	Thailand
1975	0.01	0.66	0.49	0.66	n.a.
1980	0.28	0.89	1.52	0.93	1.46
1981	0.23	0.78	1.62	0.91	1.47
1982	0.32	0.84	1.55	0.90	1.82
1983	0.67	0.98	1.37	0.88	1.37
1984	1.13	1.06	1.43	0.97	1.58
1985	1.36	1.23	1.53	1.04	1.94

SOURCE: Institute of Developing Economies.

ASEAN Exports

The total value of ASEAN textile and garment exports rose steadily until 1984 (Table 6.11). In 1985, exports declined by 5 per cent, largely because of the significant drop in Singapore's textile exports. Overall, the growth rate during the first half of the 1980s was still impressive at 32.6 per cent. Indonesia had the highest rate of increase, averaging 35.3 per cent annually from 1980 to 1985. From a mere US$3.5 million in 1976, exports reached US$552.5 million in 1985 and US$644.1 million during the first nine months of 1986.

Thailand's textile exports grew at 12.5 per cent per year during the first half of the eighties while Malaysia's grew moderately at the rate of 7.9 per cent per year in the same period. Singapore's export of textiles dropped by 3 per cent in 1985, but for the entire half of the 1980s, exports increased by 11.4 per cent. Among the ASEAN countries, the Philippines had a dreary export performance

TABLE 6.11
ASEAN: Distribution of Textile Exports by Country, 1970–85
(Value in million US$)

Country	1970	1975	1980	1984	1985
Indonesia	n.a.	2.7	144.0	496.2	552.5
Malaysia	21.2	94.9	371.2	495.9	527.3
Philippines	22.1	71.2	386.5	328.1	334.2
Singapore	n.a.	247.4	796.7	915.1	887.8
Thailand	n.a.	n.a.	500.1	829.3	884.3
Total ASEAN	n.a.	n.a.	2,198.5	3,064.6	2,915.5

SOURCES: Indonesia: Central Bureau of Statistics, *Statistical Yearbook of Indonesia*; Malaysia: Department of Statistics, *Yearbook of Statistics*; Philippines: National Census and Statistics Office, *Philippine Foreign Trade Statistics*; Singapore: Department of Statistics, *Yearbook of Statistics*; and Thailand: Department of Economic Research, *The Bank of Thailand Quarterly Bulletin*.

in the first half of the 1980s. Its exports started falling in 1982 and continued to decline until 1984, then began to rise again in 1985. Textile exports during the period declined by 13.5 per cent.

ASEAN textile exports consist mainly of garments. The proportion of garments to total textile exports range from 58.6 per cent for Indonesia to 79.0 per cent for the Philippines. It is only in Indonesia that exports of fibres and fabrics have been rising faster than garment exports.

The surplus in the region's textile trade is due mainly to a surplus in the garment trade. All the ASEAN countries are now net exporters of garments. In contrast, except for Thailand which now has an exportable surplus of fibres and fabrics, all the rest still have trade deficits in textile products.

ASEAN exports of fabrics and garments go mainly to the United States and European markets, all of which are governed by quota restrictions. Exports of synthetic fibres and cotton yarn and thread, on the other hand, find their way mostly to other Asian countries with a lower or the same level of development. Intra-regional trade has declined and is now minimal,

ASEAN Imports

In contrast with the rising level of exports, imports of textiles and garments in ASEAN have been declining (Table 6.12). Overall, the level of imports decreased by 1.2 per cent from 1980 to 1985, although Thailand and Malaysia increased their textile imports during the period. Indonesia experienced the largest decrease of 20.8 per cent. Philippine imports went down by 13.9 per cent.

Imports consist principally of raw materials and intermediate textile goods. Garment imports are very minimal. It is only in Malaysia that garment imports compose approximately 10 per cent of all imports. In other countries, garments account for about 1 per cent of total imports. Despite increases in domestic production and even substantial increases in exports of yarns and fabrics, imports

TABLE 6.12
Distribution of Textile Imports by Country, 1975, 1980, and 1985
(Value in million US$)

Country	1975	1980	1985
Indonesia	282.2	513.2	406.5
Malaysia	135.0	418.7	427.2
Philippines	144.0	253.9	218.6
Singapore	374.0	857.3	850.6
Thailand	n.a.	341.8	453.8
Total ASEAN	n.a.	2,384.8	2,356.6

SOURCES: Same as for Table 6.11.

of these items remain high. This indicates that there are differences in types and quality of these products imported and exported. Garment exporters and a selected consumer group still prefer to use imported fabrics.

The bulk of fibre imports come from other Asian countries, mainly the Asian NIEs, with Japan and the United States following closely. The biggest suppliers for raw materials such as fibres, yarn, and thread used to be Japan and the other developed countries. Their shares, however, have declined with the emergence of other Asian suppliers.

3. Production Technology

The pattern of production and trade in textiles of the ASEAN region shows an obvious bias towards garments, indicating the region's comparative advantage in these items, due to the abundant supply of low-cost labour. The textile industry generally uses a labour-intensive technology; although it is now increasingly taking a more capital-intensive form in developed countries, the industry is still labour intensive in developing countries. It is estimated that the textile industry employs approximately 25 per cent more manpower in developing countries than in developed countries.

Factor Productivity

A major factor working against the ASEAN countries is the relatively low labour productivity of their textile industries. Table 6.13 shows the labour productivity of the industry and of the whole manufacturing sector. Average labour productivity of the industry is lower than the average for the entire manufacturing sector. Between textiles and garments, the former has higher labour productivity. Among the ASEAN countries, Singapore is found to have the highest labour productivity, and the Philippines, the lowest. Generally, labour productivity in the region increased during the first half of the 1980s. Once again, the Philippines was an exception. A survey of large textile firms disclosed that productivity in the Philippines dropped by 13 per cent from 1980 to 1984. On the other hand, the growth in productivity in Indonesia was the highest in the region.

TABLE 6.13
Factor Productivity in the Textile and Garment Industries and Manufacturing Sector, 1980–85

	Textiles	Garments	Total Textiles and Garments	Total Manufacturing
A. Labour Productivity (US$/worker)				
1. Value Added per Worker				
Indonesia				
1980	1,858	946	1,801	4,058
1982	2,248	2,092	2,233	4,835
1984	2,327	1,948	2,277	4,142
Philippines				
1981	1,023	981	1,000	2,762
Singapore				
1980	7,581	4,576	5,367	13,952
1982	7,778	5,326	5,772	15,872
1985	10,343	6,339	6,738	19,160
Thailand				
1980	n.a.	n.a.	3,411	3,869
1983	n.a.	n.a.	3,927	4,594
2. Ouput per Worker (US$/worker)				
Malaysia				
1981	15,144	6,438	11,200	28,006
1983	16,801	8,559	13,048	36,229
B. Capital Productivity				
1. Value Added per Capital Unit				
Philippines				
1981	4.74	5.81	5.12	4.99
Singapore				
1980	2.88	7.86	4.78	4.58
1982	11.21	10.10	10.37	4.21
1985	12.75	14.59	14.27	5.41

SOURCES: Same as for Table 6.11.

Labour cost figures for selected countries are shown in Table 6.14. The data reveal that wages in the Philippines are the lowest in ASEAN. Wages in Indonesia and Thailand are also low, while in Malaysia they are higher. Singapore far outstrips the wage rates in the other ASEAN countries, with wages averaging more than six times the wages in the Philippines. When ASEAN wages are compared with U.S. wages, the differential observed is even wider. The low wages

TABLE 6.14
Hourly Wages in Manufacturing and Textile Industries of Selected Countries, 1984
(In US$)

	Manufacturing[a]	Textiles[b]	Rank[c]
China	0.415	0.26	42
Hong Kong	1.441	1.65	27
India	0.231	n.a.	n.a.
Indonesia	0.302	0.22	43
Japan		6.28	13
Malaysia	1.035	n.a.	n.a.
Philippines	0.247	n.a.	n.a.
Singapore	1.538	n.a.	n.a.
South Korea	1.463	1.89	26
Taiwan	1.794	1.64	28
Thailand	0.411	0.56	36
United Kingdom		5.46	16
U.S.A.		8.60	5

[a]1984 average.
[b]Spring 1984.
[c]For textile industries only.

SOURCES: For manufacturing: Research Institute of Overseas Investment, *EXIM Review* 7, no. 1 (1986); for textiles: EIU, *Textile Outlook International*, January 1986.

in ASEAN countries give the region an advantage in labour-intensive industries. What can work against this advantage is the higher labour productivity in developed countries. A study by the Economist Intelligence Unit (United Kingdom) disclosed that the productivity of the lowest-paying textile producers is less than a seventh of U.S. productivity and a sixth of the productivity of the most efficient European producers. The advantage of developing countries is therefore considerably reduced, especially in the more capital-intensive stages of textile manufacture, as in fibre production. Developed countries, however, do not seem to have an effective counter to low wages in garment production, where the required skills are easily acquired and the machinery is not too sophisticated.

One possible reason for the low labour productivity of the industry is the fact that the average compensation of a worker in the industry is much lower than the average for the whole manufacturing sector. The average employment cost in overall manufacturing is 30 to 54 per cent higher than the average in the textile industry. In view of the low compensation, more highly skilled workers cannot be induced to stay in the industry.

Cost of Production

The cost of raw materials accounts for the biggest proportion of production cost in all stages of textile production. Raw material prices are therefore very

important. Price distortions can arise because of protection accorded to the industry. A distortion in input prices can be carried forward to the final output through raw materials linkages.

ASEAN countries are still not self-sufficient in textile raw materials. With the exception of Thailand, all the others are net importers of fibres and fabrics. The prices of imported inputs are commonly determined by commodity markets in the United States and by other main suppliers. Input prices can, however, increase as a result of tariffs and import duties imposed by ASEAN governments.

A clear case of how protection can distort prices is fabric production in the Philippines. Its main input, fibre, is heavily protected by Philippine tariffs and import restrictions. Consequently, the prices of domestic raw material inputs are much higher than the equivalent import prices (by 119.3 per cent in 1984), effectively penalizing fabric production and making its products uncompetitive.

Aside from raw material costs, energy costs are also important in the overall cost of production. In an inter-country study of selected manufacturing enterprises published by Japan's Institute of Developing Economies in 1982, the following electricity costs in early 1980 were estimated for three ASEAN nations: the Philippines, US$0.07/kWh; Indonesia, US$0.03/kWh; and Thailand, US$0.50/kWh. In contrast, electricity charges in Japan and Korea during the same period were calculated to be US$0.07/kWh and US$0.06/kWh respectively.

IV. Problems and Prospects of the Industry

The ASEAN textile industry has graduated from being an import-substituting industry to being a major export earner. Although well established, the industry still faces many problems, both external and domestic.

1. External Problems

Growing Protectionism

Trade in textiles is increasingly being subjected to comprehensive regulations by governments. The success of Asian countries in developing their textile industries, starting with Japan in the 1950s, has resulted in rapid increases in exports to the United Kingdom and the United States. The developed countries were unable to respond by rapidly restructuring their textile industries. Instead, claiming market disruptions, they sought the application of GATT provisions to regulate textile trade.

Subsequently, the Multi-Fibre Arrangement (MFA) was introduced whereby the developed countries regulated the imports of textiles from developing countries. Since 1973, four MFAs have been in operation, using quotas and tariffs to ration developing countries' exports. At present, import tariffs on textile and clothing in industrialized countries are two to three times higher than tariffs on manufactured goods as whole.

Since the main export markets of ASEAN countries, especially for fabrics and garments, are MFA members such as the United States and European countries, trade is subjected to quotas and sometimes non-tariff barriers such as intensive checks and countervailing duties. Bilateral agreements are negotiated between individual ASEAN countries and developed countries. Although some negotiations have resulted in higher quotas, when exports reach a certain level too fast, they are bound to be restricted.

The extension of the MFA in July 1986 for a fourth term, was expectedly met with objections by several developing countries. Developing nations view the new accord as symbolizing the way industrial states dictate terms to protect their home industries. The latest agreement specifically adds silk, linen, ramie, and jute to the existing fibres in an attempt to finally control trade in all textile products. In effect, the new agreement will restrict additional trade — including (using 1985 figures) US$813 million of Hong Kong's exports, US$368 million of the Republic of Korea's exports, and US$203 million of China's exports.

At this point, we briefly review the background of the MFA, and consider what its effects have been so far on the world textile industry. The MFA was agreed upon in 1973 and became operative in 1974. It was renewed in 1978, in 1982, and in 1986. The 1986 agreement extended the MFA for another five years up to July 1991. All four agreements were made under the auspices of GATT. The contracting parties were some fifty countries. They included almost all developed countries, together with those developing countries which were substantial exporters of textiles and clothing. It was agreed that the developed countries could place quantitative restrictions on imports of textiles and clothing from the developing countries through a quota system whereby each developing country would be given a quota allocation for its exports of textiles and clothing to the developed countries during a given period.

The quotas were arrived at through a series of bilateral negotiations between each developed country. Base level quotas were agreed upon in volume terms, together with provisions for annual growth rates and for some flexibility between quotas and years. In the first agreement, annual growth rates were not normally to be less than 6 per cent, but lower growth rates were embodied in the later agreements.

The MFA does not cover all the restrictions that exist on international trade in textiles. Most developed countries have restrictions on imports from exporters who are not members of the MFA, such as Taiwan, and some countries of Eastern Europe. In addition, there are a number of preferential arrangements.

The main effect of the MFA has been to limit imports of textiles and clothing into the developed countries from the developing and newly industrializing countries. Other consequences include the following:

(1) Developing countries differ in the ways in which they allocate quotas, but in general, quotas go to well-established firms. This makes it difficult for newcomers to obtain export quotas. Since quotas are in quantum terms, those firms with quotas may try to improve quality in an attempt to increase value added and profitability.

(2) The MFA confirms the dominance of the leading supplying countries, namely, Hong Kong, South Korea, and Taiwan, who between them have about 70 per cent of all exports covered by quota. At the same time, the MFA has encouraged the growth of the textile and clothing industries in countries which originally were not subject to quota restrictions because they were small suppliers; once their exports grow to become a threat they too become subject to quota limitations.

(3) Where quotas place limits on exports to developed countries, their effect is to raise prices above the level that would be reached in a competitive market. Quota holders therefore earn a windfall gain or rent. This is seen most clearly in the case of Hong Kong, where quotas can be bought and sold, and often change hands for substantial amounts.

(4) Consumers in developed countries do not suffer from lack of choice on account of the MFA. They can in general obtain goods from their own manufacturers, or from other developed countries. They will, however, probably pay higher prices than if imports were freely available from all countries. The quotas thus act as supplementary tariffs in raising domestic prices in developed countries. The benefits accrue partly to the developing countries in the form of quota rents and partly to manufacturers in developed countries in the form of higher profits than would otherwise be obtained. Some marginal textile and clothing firms in developed countries have therefore been able to stay in existence.

Over the long term, it is very likely that the MFA will continue to operate and remain in a form that is basically consistent with a desire by developed countries to continue to place limitations on their imports of textiles and clothing from developing and newly industrialized countries.

The 1986 MFA agreement continues the historic tradition of including all conceivable fibres in the MFA and of plugging all the "leaks" which allowed imports of clothing and textiles to grow under the previous arrangements. With the inclusion of additional natural fibres, the industrial countries have at least temporarily eliminated the possibility of having trade diverted into non-MFA fibres. Despite its elaborate new extension, the 1986 MFA agreement still cannot preclude the possibility of increased exports from non-MFA-controlled industrial countries. It will be through extending increasingly restrictive bilateral agreements that the industrial countries will continue to exert protectionist pressures on developing country exporters.

Technological Developments

Rising labour costs in developed countries have led to intensified research and development into cost-reducing/labour-saving technologies. In textiles, ways are being developed to increase the speed of machines, combine a number of processes, and increase automation to lessen the need for more workers. Under this type of technology, textile manufacturing becomes highly capital-intensive. Even in apparel manufacturing, technological developments are being pursued such as the use of lasers in laying and cutting, and computer applications in

grading, marking, and cutting. These developments can lead to new types of products but can also hasten the obsolescence of equipment long before they are worn out. Since developing countries, like the ASEAN countries, are dependent on imported technology, the effort to catch up means a higher capital requirement. Experience has shown, however, that although it can be capital-intensive in developing countries, an industry still provides competitiveness to labour-intensive countries.

Slow-Down in Growth of Developed Countries

ASEAN countries have also suffered from overdependence on developed countries for their exports. The modest economic growth and worsening balance of trade positions of developed countries like the United States have added further to protectionist pressures.

2. Domestic Problems

Some of the commonly observed problems of the industry in the ASEAN countries are as follows:

1. *Dependence on imported raw materials.* This subjects production to delays in procurement, added costs of freight and insurance, and bureaucratic red tape.
2. *Antiquated equipment.* Much of the existing textile equipment are old and obsolete. Modernization, however, requires massive capital investment, which some countries are not prepared for.
3. *Low labour productivity.* This can significantly affect comparative advantage in the industry.
4. *Need to acquire marketing capability.* This will require government assistance to the producers in the industry. Alternatively, renewed efforts could be pursued to encourage joint-ventures with foreign companies which have global marketing outlets.

Aside from these problems which are common to most ASEAN countries, there are also *problems specific to certain countries*:

1. *Smuggling.* This has been identified by Philippine textile producers as a big problem which destroys the competitiveness of the domestic industry.
2. *Government policies/export regulations.* Official fees and stringent regulatory requirements can raise export prices above those in other countries.
3. *High interest rates and energy costs.*
4. *Industrialization policy/protection rates.* This has often led to the production of goods which cost more than they would if imported directly and which are uncompetitive in export markets.

3. Prospects

Although there are many problems which each country's industry has to grapple with, the overall prospects are promising. The share of developed countries in world production and trade of textiles and clothing is declining. The NICs have been experiencing a rising cost of production and are unlikely to expand their production capacities further. Instead, they are investing in advanced machinery and equipment to improve efficiency. Textiles are therefore likely to remain comparatively advantageous for developing countries like the ASEAN.

Industrialized countries have a US$15.8 billion deficit in clothing, but they have a US$5.1 billion surplus in textiles. Only a few countries handle the trade with these countries. Two-thirds of the clothing deficit is due to trade with Hong Kong and South Korea. ASEAN's share has been growing but the direction is towards the United States or the European countries. Still largely unexplored are the non-quota markets of Japan, Australia, the Middle East, and Africa. Although these countries are considered difficult by exporters because of inconsistent price quotations and lack of firm guidelines for garment exports, they can be penetrated with a comprehensive marketing programme. But for this, the assistance of the government will probably be required.

V. The Emergence of China and Implications for ASEAN-China Relations

One major development that can affect the prospects of the ASEAN textile industry is the recent emergence of China as a major producer and exporter of textiles. There is a growing concern that China's entry into the international trade of textiles poses a threat to ASEAN producers. But whether China's industry is indeed in competition or rather complementary to the textile industry in the ASEAN region has not yet been conclusively shown.

1. China's Production of Textiles

Before the twentieth century, the textile industry played a very important role in China. However, in the country's pursuit of a self-sufficient, closed economy, the industry declined. In a dramatic turnabout during the past decade, China reopened its economy and pushed for a modernization programme. This new development has pushed the industry toward recovery. The production of textiles has increased tremendously.

China's textile industry is the world's largest, whether in terms of the number of looms or in terms of raw materials. The combined production capacities of the ASEAN countries pale in comparison to that of China. In 1981, China had 18 million spindles, 540,000 cotton-type looms, and 700,000 wool spindles. Its total fibre consumption was 4.5 million tons of fibre, 75 per cent of which was cotton. Production of cotton yarn and fabrics has reached record levels of 3.2 and

1.8 million tons, respectively. Considering also cotton and polyester-blended fabrics, production has reached 14.3 billion metres.

Despite such high production levels, the industry still has to improve, since much of the machinery are antiquated and productivity levels are still low. Efforts are being undertaken to upgrade the industry's facilities using technology imported mainly from Japan. The production of man-made fibres has already greatly improved with the establishment of new petrochemical plants. Thus, while the share of cotton fibres remains very large at 75 per cent, the production of synthetic fibres is expected to increase. Although its garment industry remains essentially oriented towards the large domestic market, sales to overseas clients have risen steadily during the past decade.

2. China's Trade in Textiles

In a span of five years from 1977 to 1981, Chinese trade in textiles increased sharply by approximately 157 per cent, from US$2.1 billion to US$5.4 billion. In 1981, China's textile exports were 2.3 times the combined textile exports of the ASEAN region. Garment exports make up only 40 per cent of total textile exports but these have had the highest growth rate, despite the lower level of development of the garment industry. Fabrics, mainly of cotton, continue to be the major export product. Export items are directed to lower-priced markets where quality and fashion standards are not very high.

Hong Kong is the major export market, followed by Japan and the United States. Hong Kong is farming out larger quantities of textiles and apparel to China for processing and finishing, to take advantage of the relatively low wages of workers in China. Labour cost in China approximates that of Thailand. These farm-outs which are either re-exported to Hong Kong or directly exported to other countries, are now competing with South Korean textiles in the Japanese market. China has become the sixth largest exporter of cotton fabric to the United States. In 1981, total exports to that country reached US$620 million, 60 per cent of which were clothing.

Rapid increases in Chinese textile exports have caused friction in both the United States and European markets. The United States has unilaterally imposed quotas on Chinese textile products, after the failure of the two countries to reach a bilateral agreement. With the EC, a bilateral agreement was reached, but this contained a very stringent safeguard mechanism. Despite the fact that China, not being a beneficiary of MFA, had to absorb tariffs from 50 to 600 per cent higher than those imposed on other exporters, China's exports still achieved explosive growth. China's increasing trade is therefore viewed with strong apprehension because it can further intensify protectionist pressures by developed countries on the exports of all developing countries, including the ASEAN.

3. China and ASEAN Relations

ASEAN-China economic relations have been largely ambivalent. Lately, however, the slackening of demand by Western countries for various commodities

produced by ASEAN countries has led to a search by the latter for alternative trade opportunities. The vast market of the newly "reopened" China is being eyed. In recent years, there has been a spate of trading missions between the governments of ASEAN members and China. Trade agreements have been reached in certain areas. However, the concern remains that China competes with ASEAN in textiles, especially in the United States.

The issue that therefore needs to be clarified is whether the textile industries of the ASEAN region and China are competitive or complementary. If they are competitive, what measures can be undertaken to lessen friction?

Several areas have to be considered. Among these are the types of products sold, the markets for the products, and price and non-price considerations.

A large proportion of China's production and exports, whether of fabrics or garments, are made of cotton. Seventy-five per cent of the fibres consumed by its mills are cotton fibres. On the other hand, the ASEAN region has long shifted to man-made materials. With the exception of Thailand, ASEAN countries are net importers of cotton yarns and fabrics. However, China will soon be increasing its production of synthetic fibres, yarns, and fabrics, with technological assistance from Japan. This will provide competition to the ASEAN textile industry. For now, the ASEAN countries remain importers of textile products coming mainly from the Asian NICs. Price and quality considerations will have to be assessed in deciding to import from China.

Competition is more evident in the U.S. market. In 1982, the combined ASEAN share in the U.S. textile imports was 13 per cent. This dropped slightly to 12.3 per cent in 1983. China's share is much larger: 18.4 per cent in 1982, dropping to 17.6 per cent in 1983. Since the ASEAN countries still do not negotiate trade agreements as a region, their share in the U.S. market is treated separately for each individual country. In terms of size, therefore, China is more likely to compete with the Asian NICs. Furthermore, China's trade is not yet governed by trade agreements and it can thus be subjected to restrictions more easily.

On the basis of price considerations, China's cost of production structure appears similar to that of the ASEAN. Both have relatively low wages. Both also have low labour productivity. The fact remains, however, that China's textiles have successfully penetrated the export markets despite having to absorb from 50 to 600 per cent higher tariffs, implying that China's textiles are priced cheaper. ASEAN countries should therefore investigate the causes of price distortions in their products to improve their competitiveness.

Quality, assurance of supply, and marketing channels are the important non-price considerations. Quality cannot be assessed in this study in the absence of reliable data. In terms of assurance of supply, the sheer largeness of the textile industry of China can be an advantage for it. In the case of marketing channels, ASEAN producers are concerned that China is using Hong Kong to reach the export markets.

The outlook points to increasing competition between China and the ASEAN region in textiles. The fear of some ASEAN producers that the increasing role of China in textile production and trade poses a threat to their industries does

not seem unfounded. This is a challenge to the ASEAN countries to finally reassess the status of their economic co-operation.

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7

Development of the Textile and Garment Industry in China and Implications for China-ASEAN Economic Relations

Lin Bi, Xu Xianquan, and Zhang Jianfen

I. Introduction

The textile industry is one of the world's traditional industries. It was once regarded by many industrialized countries as a stepping stone towards industrial development and economic prosperity. Today, it also plays an important role in building up China's socialist economy. For over thirty years since the founding of the People's Republic of China (PRC), the country's textile industry has made a great contribution to the people's welfare, social employment, promotion of foreign trade, as well as capital accumulation. Being the largest manufacturing industry in the economy, its total output value accounted for 20 to 25 per cent of the national industrial output during the 1950s. Due to the overwhelming development of heavy industry, its weight in the national economy has been gradually reduced. Nevertheless, the industry still accounted for 18 per cent of the total national industrial output value in 1985 and ranked second only to the machine-building industry among the ten key industries of the country. Of the 18 per cent, 15.5 per cent was accounted for by textiles proper, and the remaining 2.5 per cent by garments. Statistics of the Ministry of Textile Industry show that in 1986 the textile and garment industry employed 6.66 million workers (not including self-employed workers in the urban and rural areas) with 4.60 million working in the textile industry and 2 million working in the garment industry, together accounting for about 17.0 per cent of the nation's total employment, second only to the machine-building industry.

Since 1987, under the policies of "economic reform" and "opening to the outside world", China's textile and garment industry has entered into a period of speedier development. Presently, China owns the largest number of cotton spindles and looms in the world and leads in the production of cotton yarns and fabrics. Its output of man-made fibres has surpassed 1 million tons to rank fourth in the world, after the United States, Japan, and the Soviet Union.

China's textile and garment industry serves not only as a cornerstone in domestic industrialization, but also plays an influential role in foreign trade.

China's textile exports (namely fibre, yarn, fabric, and garments) exceeded US$7.5 billion in 1985 and has since become China's leading export commodity. Many textile products have important positions in the international market with cotton yarns and fabrics making up 20 per cent of the world's exports. The development of China's textile industry has increasingly captured world-wide attention.

This paper analyses three aspects of China's textile and garment industry: (a) the current production and future development of the industry; (b) the current status and outlook for trade in textiles and garments; (c) the current status and outlook of the textile and garment trade between China and ASEAN.

II. Current Production and Future Development of China's Textile and Garment Industry

1. Growth in Production

According to statistics of the Ministry of Textile Industry, total output value of China's textile and garment industry rose by 126.8 per cent from RMB59.12 billion in 1978 to RMB120.00 billion in 1986 with an average increase of 9.5 per cent per annum. By volume, production in man-made fibre, wool, bast fibre, and silk spinning and weaving all enjoyed multi-fold increases, while the growth of the cotton spinning and weaving industry was comparatively moderate.

In 1987, cotton yarn output increased to 4.36 million tons, and cotton fabric to 16.5 billion metres, a growth of 86.7 and 49.6 per cent over 1978 respectively. Meanwhile, responding to the two price adjustments by the government in 1981 and 1983 for cotton/polyester blend and pure cotton fabrics, the output of cotton yarn and fabric dropped back drastically in the consecutive years of 1983 and 1984 following an unprecedented growth in 1982. It was not until 1985 that production improved and the output of hand knitting wool yarn, woollen fabric, bast fabric, and silk fabric increased by between 94 to 333 per cent over the 1978 levels (Table 7.1). The reason behind the two price adjustments is that the purchasing price for cotton had long been kept too low. Therefore, China had to import yearly a large quantity of cotton that reached 900,000 tons in 1980 and cost the country a large amount of foreign exchange. The low price of cotton fabrics resulting from the low price of cotton led to a situation of excess demand, while the reverse was true for polyester/cotton fabrics. The purpose of the price adjustments was to correct the imbalance.

The production of man-made fibres in 1976 was only 146 thousand tons. Beginning from the 1980s, with a number of large- and medium-scale petrochemical complexes such as the Shanghai Petro-Chemical Complex and Yizheng Petro-Chemical Complex coming on stream, man-made fibre output in 1986 surpassed 1 million tons, which was about six times above that of 1976.

Although China's garment industry had a late take-off and the production scale is still not large enough, it displayed a vigorous growth. In 1980, China's

TABLE 7.1

China's Textile Output by Type of Products, 1976–85

	1976	1978	1980	1983	1984	1985	85/76 (%)	85/78 (%)
Total Value of Output (RMB billion)	–	52.9	73.6	95.6	108.3	–	–	–
Man-made fibre ('000 tons)	146.1	284.6	450.3	540.7	734.9	947.5	548.5	232.9
Cotton yarn ('000 tons)	1,960.0	2,382.0	2,926.0	3,271.0	3,219.0	3,591.0	83.2	50.8
Cotton fabric (billion metres)	8.8	11.0	13.5	14.9	13.7	14.3	61.8	29.6
Knitting goods ('000 tons)	–	427.1	545.5	688.6	676.8	–	–	–
Hand knitting woollen yarn ('000 tons)	27.8	37.8	57.3	102.1	110.0	125.9	353.9	333.1
Woollen and worsted fabric (billion metres)	0.07	0.09	0.1	0.14	0.18	0.22	208.5	145.5
Raw silk ('000 tons)	22.8	29.7	35.4	36.9	37.6	39.0	71.0	31.3
Silk fabric (billion metres)	0.46	0.61	0.76	1.00	1.18	1.40	204.3	93.8
Piece goods of bast fibre (million metres)	23.08	25.51	40.62	47.39	62.60	–	171.2•	145.5•

•1984.

SOURCES: *China Textile Industry Yearbook*, 1984 and 1985.

TABLE 7.2
China's Textile Production Capacity, 1978–85
(In '000 tons)

	Cotton Spindles	Cotton Looms	Wool Spindles	Woollen Looms	Man-Made Fibres	Finished Goods in Cotton Sector*
1978	15,619.20	469.50	478.10	7.12	381.00	686.60
1980	17,796.80	539.10	600.50	8.33	521.00	773.50
1981	18,935.40	570.60	744.40	10.02	633.90	818.00
1982	20,189.90	595.00	888.80	12.45	682.40	881.70
1983	21,405.60	624.70	1,005.30	14.65	769.90	912.00
1984	22,196.50	633.50	1,205.20	17.12	820.40	939.30
1985	—	—	1,395.00	—	1,038.80	—
Growth Rate 84/78 (%)	42.1	34.9	152.1	140.5	115.3	36.8

*In billion metres.

SOURCES: *China Textile Industry Yearbook*, 1981, 1984, and 1985.

garment industry turned out 720 million units of garments rising to 1,270 million units in 1985, with an average annual increase of 12 per cent.

Technical innovation in textile equipment and facilities has been less impressive. The output increase relies mainly on extension of existing production capacity. Between 1978 to 1984 the newly installed facilities in the cotton textile industry added 6,577,300 cotton spindles and 164,000 cotton looms. The production capacity of both wool textile and man-made fibre industries also registered multi-fold increases (Table 7.2). In an effort to improve product value added, China's textile industry has undertaken readjustment, but the progress is slow.

2. Rationalization of Industrial Structure

The structure of the textile and garment industry may be examined from four aspects, that is the structures of sectors, products, raw fibres, as well as technologies. The present structure of China's textile and garment industry is described below.

Rapid Development of Highly-Processed Sectors

In terms of product classification and depth of processing, China's textile and garment industry can be divided into several sectors, namely (1) man-made fibre; (2) cotton spinning and weaving; (3) wool spinning and weaving; (4) silk and bast fibre spinning and weaving; (5) cotton printing and dyeing; (6) knitting; and (7) garments. Among these sectors, man-made fibre falls into the textile material category; cotton spinning and weaving, and silk and bast fibre spinning and

weaving fall into the primary-processed product category; and wool spinning and weaving, including printing and dyeing processing, falls into the vertically-integrated product category.

Cotton textiles including downstream operation of printing and dyeing is the mainstay of China's textile and garment industry. As early as the 1950s, this sector made up about 90 per cent of the industry's total output value. This share has been shrinking with rapid expansion of other sectors, to 60 per cent in 1980, and further to 55.2 per cent in 1984.

However, sustained increases in the production of highly processed sectors was noted. The share of garments in the output value of the textile and garment industry rose from less than 4 per cent in 1978 to nearly 12 per cent in 1984. The share of wool textiles (including printing and dyeing) rose from 5.7 to 6.5 per cent, and that of man-made fibres, which is a capital/technology-intensive sector, rose from 6 to above 9 per cent. However, in spite of such progress achieved in these sectors, their contribution to the industry is still less than expected due to their inability to meet the growing market demand (Table 7.3).

TABLE 7.3
China's Textile and Garment Industry: Output, 1978–84

	1978	1980	1981	1983	1984
Output Value (RMB billion)*					
Total	45.60	73.67	86.55	88.97	98.79
Man-made fibres	2.83	4.98	6.19	6.02	9.06
Finished goods in cotton sectors	31.68	43.89	50.08	51.16	54.57
Knitting goods	4.09	6.39	8.16	7.72	8.22
Woollen and worsted goods	2.68	3.47	4.35	5.65	6.42
Bast fibre goods	0.75	1.00	1.07	1.61	1.68
Silk goods	3.57	4.58	5.40	6.31	7.41
Clothing	—	9.36	11.30	10.50	11.43
Percentage Distribution					
Total	100.0	100.0	100.0	100.0	100.0
Man-made fibres	6.0	6.7	7.1	6.8	9.2
Finished goods in cotton sectors	66.9	59.6	57.9	57.5	55.2
Knitting goods	8.6	8.7	9.4	8.7	8.3
Woollen and worsted goods	5.7	4.7	5.2	6.4	6.5
Bast fibre goods	1.6	1.4	1.2	1.8	1.7
Silk goods	7.5	6.2	6.2	7.1	7.5
Clothing	3.5	12.7	13.1	11.7	11.6

*The total output value does not include the value of non-state enterprises.

SOURCES: *China Textile Industry Yearbook*, 1981, 1984, and 1985; *China Economic Yearbook*, 1981, 1984, and 1985.

Changes in Product Composition

Final consumption of textiles is mainly in three areas, namely garments, furnishings, and industrial use.

As China's social economy progresses, profound changes are taking place in the people's living standards and consumption patterns. These changes are reflected in the shifts in textile consumption patterns from mono-consumption of clothing to more diversified consumption, which in turn diversifies China's textile production structure. Prior to the mid-1970s, over 90 per cent of the textiles were consumed by the garments sector and the rest were used for industrial purposes, as the consumption by the furnishings sector was virtually non-existent. In 1984, this consumption pattern showed a ratio of 80:13:7. Although it still indicates a wide gap with the United States where the ratio is 40:30:30 and with Europe with a ratio of 50:20:30, it represents a general trend towards the changing structure of China's textile and garment industry.

More Diversified Textile Materials

The changes in composition of textile products reflect improvements in raw materials and technologies. For many years, cotton accounted for over 90 per cent of textile fibres in China's textile and garment industry, leading to the continuing lack of variety in China's textiles. Over-population coupled with limited arable land has deepened the problem of balancing land allocation between grain and cotton planting. To alleviate the situation, the policy of "developing man-made fibres parallel to natural fibres" has been implemented to focus on the expansion of man-made fibres, and the purchasing prices of natural fibres other than cotton were raised significantly to stimulate production. As a result, textile raw materials are becoming more diversified. The 1984 mill consumption of fibres consisted of 3,470 thousand tons of cotton (62.49 per cent), 1,090 thousand tons of man-made fibres (19.6 per cent, with nearly three quarters being synthetic fibres), 755 thousand tons of bast (13.3 per cent), 133 thousand tons of silk (2.4 per cent), and 113 thousand tons of wool, angora, and animal hairs (2.0 per cent). The ratio of natural to man-made fibres shifted from 95:5 in 1976 to 80:20 in 1984.

China is basically self-sufficient in fibre resources. To meet the varied demands of the domestic and foreign markets, China has been importing some textile fibres, particularly of wool and man-made fibres in recent years. The import volume of synthetic fibres alone exceeded 700 thousand tons in 1985 or a quarter of the world synthetic fibre export; China is the world's leading importer.

Multi-Level Technologies

The technological improvement made in China's textile and garment industry combined with the advanced technologies and equipment imported in recent years has modernized the industry. But on the whole, traditional technologies and methods of production still prevail in most of the industry. Technologies and equipment such as open-end spinning, shuttleless weaving, and special finishing adopted world-wide during the 1970s make up only a small part of the production. The application of computer-controlled equipment is still under development. So

traditional technologies, combined with advanced and handicraft technologies co-exist in China's textile and garment industry. However due to the prevalence of traditional technologies, the equipment and facilities are generally considered backward, with low levels of automation and productivity. According to the Ministry of Textile Industry in 1985, China had 23,230 thousand cotton spindles; 1,140 thousand or about 0.5 per cent were open-end rotors. The output of yarn averaged 23 kilograms per thousand cotton spindles per hour, and the average productivity per worker was about 1.5 pounds per hour at 22s cotton count, and 0.36 pounds per hour at 36s cotton count with an average of 22s cotton count. China had 620 thousand cotton looms including 140 thousand broadlooms and 5,000 shuttleless looms. The average capacity of cotton loom was roughly 4 metres per hour. The production of a hundred-metre fabric required 14-kilogram yarn at an average width of 1.02 metres.

The productivity of China's man-made fibre industry is lagging far behind the international norm. The average annual output per person, between 1980–84, was 7.3 tons, as against 50 tons per person in the United States and Japan.

The technical level of China's garment industry is even lower than that of the textile industry. Of the existing equipment in the garment industry, 58.4 per cent are medium- or low-speed electrical plain seam sewing machines and electrical scissors of the 1950s and 1960s; 25.3 per cent are sewing equipment of the 1970s; only 0.7 per cent are computer-controlled equipment of the 1980s; and the rest are of the 1930s and 1940s vintage.

3. Problems and Prospects

From the above analyses, it is obvious that China's textile and garment industry has generally developed fast, yet some structural drawbacks do exist. In terms of traditional product processing, it is already a self-contained industry with a complete range of products and large-scale production. But its inner structure is comparatively irrational. Presently, the industry has an excessive concentration in primary and semi-processed product sectors with cotton spinning and weaving in a dominant position. Its product structure generally follows the pattern of large lots, regular items, and long cycles, which can neither adapt to the trend of multi-level consumptions on the domestic market nor meet the requirement of the international market for finished, quality, and diversified products with small lots and short cycles (including shipment).

In the long run, China's textile and garment industry still has a bright future for the following reasons:

(1) A number of new industries will emerge along with the development of the national economy. However, it is highly unlikely that these emergent industries will play a leading role at least until the year 2000. Therefore traditional industries like textiles and garments will continue to serve as a major force in China's modernization drive.

(2) Textiles and garments are basic necessities. Population growth and sustained development of the national economy will raise the textile consumption

level of the Chinese people. China's fibre consumption per capita is 3.5 kilograms, only half the world average, and far behind the 20 to 25-kilogram level of some industrialized countries. This implies a great potential for China's textile and garment industry.

(3) China's government will continue to back up the textile and garment industry. To revitalize the industry, the strategy designed to expand end-use textiles and achieve economic results was put forward by the government in 1985. According to the plan, priorities will be given to the man-made fibre and highly-processed product sectors such as garments. Presently China's textile and garment industry is at a historical turning point. It is gradually shifting emphasis from extension of production capacity to technological innovation. It is expected that China's textile and garment industry will take on a new look in the forthcoming decade.

a. Production expansion of the cotton textiles will not be remarkable as the expansion efforts are being concentrated on the manufacture of highly-processed products.
b. The proportion of man-made fibre in total textile raw materials will rise from the current 20 per cent to 35–40 per cent, and the fibre consumption per capita will also rise from 3.5 to 7 kilograms.
c. The consumption ratio between garments, furnishings, and industrial-use textiles is anticipated to rise to 60:20:20 from the present level. In this process, the growth rate of the garment industry will certainly be higher than that of the textile industry and the proportion of garments will exceed 70 per cent.
d. The total output value of the textile and garment industry grows at an average annual rate of over 10 per cent and trade will expand in the same way, with the export growth of garments and other highly-processed textiles exceeding that of primary-processed ones.

III. Current Status and Outlook of China's Trade in Textiles and Garments

1. Current Status

There has been a rapid growth in China's textile and garment exports following the strong performance of the industry during the 1970s, particularly with the implementation in 1978 of the policy of opening to the outside world. According to China's customs statistics, in 1986, textile and garment exports (including goods processed with supplied materials), totalled US$8.29 billion, equal to 30.3 per cent of China's total export revenue, a growth of 83.8 per cent from 1980, and 4.1 times the value in 1975. With an average annual increase of about 10.7 per cent from 1980 to 1986, its growth has surpassed that of the world's trade in textiles and garments as well as that of China's total exports (Table 7.4).

As one of the primary textile exporting countries in the world, China accounted for 6.4 and 5.5 per cent of the world's total value of textile and garment exports

TABLE 7.4
China's Textile and Garment Exports, 1980–86

	Export Value (US$ billion)	Annual Percentage Change	Share of China's Total Exports (%)
1980	4.51	—	24.9
1981	5.00	10.9	22.7
1982	5.03	0.6	22.5
1983	5.64	12.1	25.4
1984	7.28	29.0	27.8
1985	7.53	3.4	27.5
1986	8.29	10.1	30.3
1980–86		10.7	

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1980–86.

TABLE 7.5
China's Share of World Trade in Textiles, 1975 and 1985
(In percentage)

	Textiles*	Clothing
1975	3.8	1.6
1985	7.8	4.2

*Excluding fibres.

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1975 and 1985; GATT, *International Trade*, 1975 and 1985.

respectively in 1985. In volume, it is the leading world exporter of cotton yarn, greycloth, and silk (Table 7.5).

In recent years, the sustained growth of exports increased the trade intensity of textiles. In 1984, the country exported around 18 per cent out of its overall production of fabrics and greycloth, of which pure cotton cloth accounted for 22 per cent, polyester-blend cloth 17 per cent, cotton-knit goods 16 per cent, silk fabric 35 per cent, woollen fabrics 6 per cent, and fabric of bast fibre 20 per cent.

The textile exports in 1985 were as follows: 15 per cent of fibres; 21.9 per cent of primary processed products (yarn, thread, greycloth, and silk greycloth, etc.); 22.9 per cent of semi-processed and processed products (converted cloth, silk, and woollen fabrics); 27.2 per cent of clothing and other wearing products including goods processed with supplied materials; and 12.8 per cent of other made-up textiles. Although significant improvements have been made over the past decade in China's textile export composition in which the share of primary and semi-processed textiles was reduced and the garment share was increased sharply, it still remains highly unbalanced with garments accounting for only a 27.2 per

TABLE 7.6
Product Structure of China's Textile Exports, 1975 and 1985
(In percentage)

	1975	1985
Fibre	20.9	15.2
Yarns and grey piece goods	23.2	21.9
Finished piece goods and semi-manufactured goods	25.2	22.9
Clothing and relative wearing goods	26.8	27.2
Made-up textile goods not elsewhere specified	13.9	12.8
Total	100.0	100.0

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1975 and 1985.

TABLE 7.7
Destination of China's Textile Exports, 1980–84
(In percentage)

	Share of Developed Countries	Share of Hong Kong and Macao
1980	54.8	26.9
1981	45.8	32.6
1982	50.1	31.1
1983	46.1	34.7
1984	53.3	34.2

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1980–84.

cent share in sharp contrast to Hong Kong's 65 per cent, Taiwan's 63 per cent, and South Korea's 60 per cent (Table 7.6). Similarly, the type of the textiles exported shows a disproportionately large 70-per cent share for natural fibres and a small 30-per cent share for man-made fibres and blended materials.

China has a broad export market for its textiles. Its exports in 1985 went to 140 countries and regions, mainly industrialized countries (50 per cent); Hong Kong and Macao (30 per cent); other developing countries (10 per cent); and the Soviet Union and East European countries (7 per cent) (Table 7.7).

China's imports of textiles also grew steadily averaging an annual increase of 20.1 per cent from 1975 to 1985; although the rate of increase was higher than that for exports, in value terms it was only over one-third of exports. Imports consisted mainly of fibres, fabrics, and a small amount of garments. For example, in 1985's imports totalling US$2,740 million, fibres were US$1,118 million;

TABLE 7.8
China's Textile Imports, 1980–85
(In thousand US$)

	Fibres	Textiles	Clothing
1980	2,094,320	680,557	11,254
1981	2,643,480	1,383,858	15,267
1982	1,496,320	853,355	7,310
1983	832,040	544,475	2,875
1984	692,970	953,409	6,170
1985	1,117,650	1,607,761	14,925

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1980–85.

fabrics US$1,607 million, and garments only US$14.92 million. As a result of the increasing need for garment materials, mainly from Japan and Hong Kong, to be processed for re-export, imports grew by 1.4 times between 1980 and 1985. However, imports of fibres fell sharply by 46 per cent between 1980 and 1985 due to the sharp decline in cotton imports, while man-made fibres and wool grew considerably (Table 7.8).

2. Impact of Industrial Restructuring in Developed Countries on China

With industrial restructuring in developed countries, traditional industries declined. Production capacity in the textile industries in the United States, Japan, United Kingdom, France, and West Germany fell by 20 million cotton spindles between the 1960s and 1970s. In contrast, there was an upsurge in developing countries with production and exports expanding vigorously in some East Asian economies, particularly in South Korea, Taiwan, and Hong Kong.

The sharp appreciation of the Japanese yen since late 1985 has hastened Japan's industrial restructuring process, with shifts away from labour-intensive industries towards technology-intensive ones. Affected by the currency appreciation, Japan's textile industry is continuing to cut its production and move its operation overseas.

At the same time, South Korea and Taiwan, the prominent textile exporters, are also faced with currency appreciation and large increases in production costs (mainly labour). As a result their textiles have declined in competitiveness in the export market. On the other hand, ASEAN countries and China have gained export competitiveness because of low labour cost.

Demand for China's textiles and garments from developed countries, particularly the United States and Japan, has increased substantially in the past two years in the form of direct import, in-country processing, and co-production. Apparently the industrial restructuring of developed countries combined with changes in international comparative advantage have a positive effect on China's

textile and garment industry. Yet it should be noted that although the textile industry in Western countries will continue to decline, the high rate of unemployment means that governments will continue with the policy of protectionism, restricting imports to maintain domestic production of textiles and to protect employment. Therefore, import quotas and other restrictive measures will likely continue to prevail for some time to come. Protectionism has a negative impact on China's textile exports, particularly low- and medium-grade textiles.

3. Prospects and Challenges

The likely trends in world textile trade are as follows:

(1) World economic growth and trade expansion have levelled off since the early 1980s. However, personal consumption and expenditure in Western countries continue to rise. The share of family expenditure on clothing and furnishing textiles is normally 6 to 9 per cent, and this is likely to stay unchanged. Therefore, demand for clothing and furnishing textiles will continue to increase. On the other hand, the demand for clothing in developing countries has grown markedly, due to both the increase of population and per capita income. During the first half of the 1980s, world textile exports stagnated whereas garment exports enjoyed an increase of 4.2 per cent per annum. With the international market increasingly turning towards "ready-to-wear" garments, world export of textiles and garments will continue to grow at a moderate pace until the end of the century (Tables 7.9 and 7.10).

(2) As stated earlier, industrial restructuring in developed countries and changes in factor endowments of countries have led to a new pattern of specialization. The textile industry will increasingly shift to low-wage developing countries, providing an opportunity for these countries to promote their textile and garment exports, a trend likely to accelerate by the turn of the century.

(3) The world textile trade will not experience any major change. Exports by developing countries to developed countries and among themselves will increase

TABLE 7.9
World Textile Exports, 1980–85

	Textiles (US$ billion)	Annual % Change	Clothing (US$ billion)	Annual % Change
1980	55.35	–	40.20	–
1981	55.30	0.00	41.40	2.99
1982	50.70	−8.32	40.60	−1.94
1983	50.70	0.00	41.00	0.99
1984	53.50	5.52	46.00	12.00
1985	55.40	3.55	49.20	6.96
1980–85		0.00		4.20

SOURCES: GATT, *International Trade*, 1982/83, 1984/85, and 1985/86.

TABLE 7.10
Share of Textiles in Total World Exports, 1981–85
(In percentage)

	Textiles	Clothing
1981	2.8	2.1
1982	2.7	2.2
1983	2.8	2.3
1984	2.8	2.4
1985	2.9	2.6

SOURCES: GATT, *International Trade*, 1982/83, 1984/85, and 1985/86.

and the developed countries will remain dominant markets, absorbing about 70 to 80 per cent of the world's total exports. East Asian countries and ASEAN will be the leading textile suppliers in the world. For example, the recent substantial increase in the imports of the United States and Japan were from East Asian countries. In the case of the EC, the sluggish market demand and the intra-EC trade will limit the growth of imports from outside the EC.

(4) The product composition of international trade in textiles is increasingly of made-up, diversified, and high-quality products with the proportion of primary and semi-processed textiles (yarn, greycloth, etc.) falling and that of finished textiles and garments rising.

(5) The pattern of world textile consumption is changing, with the growth rate of demand for clothing levelling off while the consumption of industrial-use, furnishing, and bedding textiles rising as a result of the growing demand from the automotive, housing, and tourist industries. For instance, among total fibre consumption in Japan, 35 per cent went into garment manufacture, 34 per cent to industrial-use textiles, 17 per cent to furnishing textiles, and the remaining 14 per cent to bedding. In the United States, clothing consumption accounted for 38 per cent, industrial-use for 30 per cent, furnishing for 18 per cent, and bedding for 14 per cent. Such a change in consumption patterns will have a sharp impact on the structure of the world textile trade.

(6) Protectionism will gain momentum. The quota restrictions for textiles will become more severe and spread to more textile items. This will severely hamper the textile exports of developing countries to the Western markets, putting the exports from these countries into difficulties and further intensifying market competition.

The global textile trading environment will provide an excellent opportunity as well as a challenge for China's textile exports. China has vast labour resources, giving it a strong comparative cost advantage for labour-intensive industries like textiles and garments. It is also rich in raw materials such as cotton, for which it has a surplus for export, and other natural fibres (silk, ramie, cashmere, angora,

etc.). In addition, its textile industry is already well developed, with considerable production capacity and technical strength. Therefore, it is to China's advantage to avail itself of the current opportunity for further expansion of textile exports. The problems that restrict exports are largely attributable to the export concentration in low- and medium-grade products, which are subject to import quotas by the developed countries as opposed to high-value-added products. At present, 60 to 85 per cent of China's textile export items are covered by such quotas, and growing protectionism will intensify China's problem of penetrating the Western market. The drawbacks currently suffered by China's textile industry arise from outdated technologies and facilities such as incomplete processing procedures and technological backwardness in printing, dyeing, and after-treatment. Inconsistent quality in textiles, especially in garment materials, result in a high rejection rate for garment processing. All these challenges can undermine the competitiveness of China's textiles in the international market.

IV. Current Status and Outlook for China-ASEAN Trade in Textiles and Garments

1. Current Status

The textile trade between China and ASEAN can be traced back to ancient times when the trade was once likened to "The Silk Road on the Sea". Although some progress in Sino-ASEAN textile trade has been achieved, yet, affected by post-war regional political and economic turbulence, the trade remained small-scale. Also the trade development with different countries was very unbalanced (Table 7.11).

TABLE 7.11
China's Textile[a] Exports to ASEAN, 1975 and 1985

	1975 (US$ thousand)	1985 (US$ thousand)	% Change 1985/75
Brunei	114.8	32.0	−72.1
Indonesia	(40,339.0)[b]	15,670.0	−41.2
Malaysia	6,170.0	19,825.0	221.3
Philippines	3.6	4,080.0	1,033.3
Singapore	58,550.0	100,468.0	71.6
Thailand	46.1	23,116.0	401.5
Total	64,880	163,193.0	151.5

[a]Including fibres, yarns, piece goods, and clothing.
[b]1965.

SOURCES: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1965, 1975–85.

The development of the textile trade between China and ASEAN countries in recent years is summarized below.

Strong Growth

China-ASEAN trade in textiles grew fast, particularly since 1979, under the impetus of China's economic reforms and the efforts of the government in trade promotions. As shown in Table 7.11, the 1975–85 decade witnessed an outstanding increase of over 1.5 times in China's textile export to ASEAN countries (except for Indonesia and Brunei). Exports to the Philippines surged by over 10 times, followed by Thailand (4 times), and Malaysia (2.2 times). Singapore had the lowest growth of 72 per cent. Due to various reasons, the direct trade relations between China and Indonesia were suspended for two decades starting from 1965. In July 1985 a memorandum of understanding on direct trade was signed between the China Council for the Promotion of International Trade and the Chamber of Industry and Commerce of Indonesia, and bilateral trade soon resumed. Although China's textile exports to Indonesia in 1985 were only 40 per cent of the 1965 level, they amounted to US$16 million.

Limited Volume

While the recent growth in Sino-ASEAN textile trade has been satisfactory, the trade volume remained limited with China's exports totalling US$163 million, or only about 4.7 per cent of the ASEAN countries' imports in 1985. Singapore alone took a lion's share (60 per cent or US$100 million) of China's exports to ASEAN. In 1985, China's total textile exports amounted to US$7,532 million, and only a trickle of 2.2 per cent found their way into the ASEAN markets.

Limited Range of Products

Fibres and various kinds of fabrics have dominated China's textile exports to ASEAN, although there are variations among ASEAN countries. China's textile exports to Thailand and Indonesia are mainly of fibres, contributing 89.6 and 91.7 per cent of its total textile exports to both countries respectively in 1985. China's exports to the Philippines, Malaysia, and Singapore are primarily of fabrics, accounting for 71.8, 82.1, and 75.4 per cent of its total textile exports to these countries respectively (Table 7.12).

The small volume of end-use textiles (including garments) that China exports to ASEAN countries conforms with the composition of textile imports of these countries. ASEAN countries have well-developed garment industries and have reduced their garment imports to less than 10 per cent of total textile imports with the exception of Singapore (Table 7.13). Although Singapore's garment imports formed a quarter of its textile imports, imports from China were a mere US$2,270,000, or 2 per cent of the country's overall garments imports in 1985.

In spite of the long trading relationship, Sino-ASEAN textile trade has yet to reach a desirable level. The main reasons are given below:

1. The lack of contact between China and ASEAN for years, comprehensive and deep understanding of each other's markets, and enthusiasm for close co-operation has hampered the textile trade's steady growth.

TABLE 7.12
Product Structure of China's Textile Exports to ASEAN, 1985

	Total Exports	Fibres	Piece Goods
Indonesia			
US$ thousand	15,670.00	14,370.00	68.80
%	100.0	91.7	0.5
Malaysia			
US$ thousand	19,825.00	1,190.60	16,270.20
%	100.0	6.0	82.1
Philippines			
US$ thousand	4,080.00	1,150.00	2,930.00
%	100.0	28.2	71.8
Singapore			
US$ thousand	100,468.00	19,100.60	75,782.80
%	100.0	19.0	75.4
Thailand			
US$ thousand	23,118.00	20,718.00	1,740.00
%	100.0	89.6	7.5

SOURCE: China's General Administration of Customs, *China's Customs Statistics Yearbook*, 1985.

TABLE 7.13
Share of Garments in Total Textile Imports of ASEAN, 1983

	Total Import of Textiles and Garments (US$ million)	Share of Garments (%)
Indonesia	160.00	6.0
Malaysia (1982)	408.00	8.9
Philippines	200.00	5.0
Singapore (1984)	1,260.00	25.0
Thailand	270.00	3.7

SOURCE: U.N., *Statistical Yearbook for Asia and the Pacific, 1984.*

2. Both China and ASEAN have similar export strategies, being overly dependent on the Western markets. Consequently bilateral trade and economic relations were overlooked.
3. The textile industries of both China and ASEAN are at the same stage of development and their product and technical structures have much in common. Again, lack of complementarity has a negative effect on bilateral trade.

2. Competition and Complementarity between China and ASEAN Textile and Garment Industries

The world textile market is huge, with total exports of about US$125 billion in 1985. China's share of this market was only US$7.5 billion (6 per cent) and that of ASEAN, US$39 million (3.1 per cent). In a positive sense, this presents an opportunity for both sides to further expand their exports. However, due to the sensitivity of textile commodities, the intense competition can always be felt in the international market. The mounting import restrictions applied by most of the industrialized countries have been extended such that quotas have become highly product specific. The result is increased market competition on certain products. Although the overall market on textiles is large, for specific products the market can be very limited. Under such circumstances, competition between China and ASEAN becomes unavoidable.

Based on the current state of China's industrial structure and technology, products from heavy, chemical, machine-building, and electronics industries are unlikely to be competitive in the short run. However, textiles and light industries can still expand exports to generate needed foreign exchange. Faced with a continuing sluggish market for agricultural products, ASEAN countries are readjusting their exports to emphasize textile exports. The textile and garment industries of ASEAN countries (except Singapore) will become a mainstay of their export trade. In 1986 textile and garment exports by Thailand already surpassed that of rice, to become the leading export item. As planned by the Thai Government, the 1990's exports of textiles and garments will double that of 1987.

A majority of China's textile exports are low- and medium-grade products. Due to the similarity in product composition of China and ASEAN a head-on competition may be unavoidable. However, China's textile exports are largely composed of fibres and primary processed and semi-processed products while ASEAN's exports are dominated by garments, so that thus far there has not been any obvious trade friction. According to Chinese Government plans, garments and other highly-processed products will be given priority in textile export promotion. However, because of constraints in the domestic economy, China's penetration of the world high fashion market will not be possible, at least in the upcoming years. It is generally considered that China's garment exports in the coming decade will still be largely confined to low- and medium-grade products. This will create head-on competition with ASEAN's exports.

China and ASEAN not only share similarities in export structures, but also in geographical export orientation. In other words, both concentrate their exports on the Western markets, particularly the United States. About 70 per cent of the United States' textile imports every year have been from the developing economies, whereas only 20 per cent in the EC market are from developing economies (Table 7.14). Each year, the United States and EC member countries together import over US$60 billion of textiles and garments. Though the overall market is tremendously large, the medium- to low-grade market is comparatively small. On the other hand, China and ASEAN countries, especially the latter, also invariably take the United States market as a main outlet for their exports. In

TABLE 7.14
U.S. and EC Imports of Textiles* and Garments, 1982–85

	1982	1983	1984	1985
U.S. Total Import (US$ billion)	11.64	13.69	19.21	21.18
From developing areas (US$ billion)	8.29	9.75	13.33	14.46
Share of developing areas (%)	71.2	71.2	69.4	68.3
EC Total Import (US$ billion)	35.31	34.44	35.33	37.21
From developing areas (US$ billion)	7.29	6.92	7.19	7.03
Share of developing areas (%)	20.6	20.1	20.4	18.9

*Excluding fibres.

SOURCES: GATT, *International Trade*, 1982–85.

TABLE 7.15
U.S. Imports of Textiles* and Garments from China and ASEAN, 1983–85
(In million US$)

	1983	1984	1985
China	923	1,110	885
ASEAN	811	1,537	1,151
Indonesia	87	266	180
Malaysia	87	157	161
Philippines	284	375	314
Singapore	201	301	252
Thailand	152	264	244

*Excluding fibres.

SOURCE: GATT, *International Trade*, 1983, 1984, and 1985.

1985, exports to the United States by ASEAN reached US$1,154 million, and by China US$880 million, or about 29.6 and 11.2 per cent of their respective exports (Table 7.15).

The differences in labour and other production costs could possibly heighten the China-ASEAN competition. The current wage level of China's textile and garment workers averages 20 US cents per hour (including social welfare). Though higher than Sri Lanka's 15 US cents, this is much lower than the ASEAN countries', though only 4 cents below Indonesia's. Together with other low-cost factors, China's textile and garment industry certainly has a greater comparative advantage.

While the textile and garment industries of China and ASEAN countries are generally in the same development stage, there are differences among the countries which makes possible the development of complementarity.

Raw Material Resources

Raw fibres form an important base for the textile industry. Since 1978, the material foundation of China's textile industry has been further consolidated. Currently, China is leading the world in fibre production. As early as 1982, China's cotton output surpassed the United States, and China also led the world in output of silk, cashmere, and angora, accounting for about half of the world's total. In addition, China is abundant in resources of ramie, etc.. In 1984, China's cotton output reached 6.25 million tons, equal to the combined output of the United States and the Soviet Union; although it declined in 1985 and 1986, a high level of 4 million tons was still well maintained. It is expected that China's cotton output will be maintained at 4 to 5 million tons for a number of years to come.

With the remarkable increase in cotton output, China need no longer import cotton and apply a system of domestic rationing. China has a huge domestic market and small quantities of cotton used to be exported to meet the demand abroad. Stimulated by the growing world market, cotton exports are expanding vigorously at 300,000 to 500,000 tons per year. Besides cotton of average length, China also produces long staple cotton. This definitely provides an assurance for "mutual exchange" on the world market.

The annual cotton consumption of ASEAN countries totalled about 450,000 to 500,000 tons, which is certainly not a negligible market. This market has been growing at a pace of 6 per cent per annum for the last decade due to the fast development of the textile industries in ASEAN. Indonesia and Thailand enjoyed the highest growth rate of around 8 per cent per annum, while growth in Singapore, Malaysia, and the Philippines was negligible (Table 7.16).

ASEAN countries are not rich in cotton resources, with imports covering 60 to 70 per cent of the cotton consumed. Presently, the annual cotton import is about 300,000 tons, of which 50 to 80 per cent are exclusively from the United States. It was not until recently that China began to export cotton to ASEAN countries, with 33,000 tons in 1985 or 11 per cent of the total imports of the latter

TABLE 7.16
ASEAN Cotton Consumption

	1977/78 Crop Year ('000 tons)	1986/87 Crop Year ('000 tons)	Annual Average Growth Rate (%)
Indonesia	80	163	8.2
Malaysia and Singapore	56	54	—
Philippines	27	30	—
Thailand	104	200	7.6
Total	267	447	5.9

SOURCE: International Cotton Advisory Committee, *Cotton: World Statistics* (July 1987.)

TABLE 7.17
China's Cotton Exports to ASEAN, 1985
(In tons)

	Amount
Indonesia	12,513
Malaysia	1;019
Philippines	603
Singapore	2,361
Thailand	16,192
Total	32,788

SOURCE: China's General Administration of Customs, *China's Customs Statistics Yearbook, 1985.*

(Table 7.17). With the rapid development of textile industries, ASEAN countries will surely need to increase their imports of textile raw materials, and China has a sufficient supply of cotton, silk, angora, cashmere, ramie, etc., to meet such a demand.

In spite of the fact that China's production of man-made fibres surpassed 1 million tons in 1986, it is the newest sector and has only limited product varieties. Therefore, each year China has to import a large quantity of man-made fibres. For example, in 1985, the import reached US$700 million. China's man-made fibre imports was once dominated by products from Japan, West Europe, and the United States. Lately, because of the growing demand in the domestic market and the on-going restructuring by the industrialized countries which led to an export decline in man-made fibres, China has begun to switch to ASEAN countries for its supply. In 1985, China imported from ASEAN countries US$40 million worth of man-made fibres, or 5.6 per cent of its total imports. Over half of the imports from ASEAN (US$23 million), mainly polyester textured yarn, nylon stretch yarn, and other synthetic fibre yarns, were from Thailand.

A populous country such as China has to be largely dependent on man-made fibres for the growing needs of its domestic market. Man-made fibre consumption is expected to grow much faster than that of natural fibres. China will continue to import a fairly large quantity of man-made fibres, particularly stretch yarn, specialty fibre, texturized yarn, etc., to compensate for the gap in its domestic production. In short, there exist adequate opportunities to expand trade between China and ASEAN in the area of textile raw materials.

Processed Products

From a macro point of view, the development patterns of both China and ASEAN countries are characterized by a lack of high value added and highly-processed products. Nevertheless, each country has its own strengths. For example, China's primary-processed and semi-processed textiles (grey yarn, silk, and cotton greycloth) are well received world-wide, including ASEAN countries, and these

products account for 60 per cent of China's textile and garment exports. In garments, in spite of rapid growth, China's exports are still confined to low-grade or low-value-added items.

In contrast, the highly-processed-product sectors, such as garments in ASEAN countries, (especially Thailand), have already successfully penetrated the U.S. and Japanese markets and are growing rapidly. Such success is as yet unmatched by China. The spectacular development of ASEAN's garment industries has brought about fundamental changes in the textile export composition, with garment exports accounting for over half of the total. Though the ratio varies among ASEAN countries, it is generally 6:4 (that is 60 per cent garments and 40 per cent other textiles) as opposed to China's 3:7 pattern. Obviously ASEAN's export composition is superior to China's but its scale of exports is much smaller (Table 7.18).

Potential complementarity also exists between the textile and garment industries of China and ASEAN. Apart from a limited variety in garment materials, China's garment industry is also adversely affected by its large-scale production, redundant management layers, and loose horizontal integration between sectors, thereby making it difficult for industry to adapt to changing international market trends, and making the industry particularly vulnerable to the intense competition in the world fashion market. China's imports of garment materials rose from US$681 million in 1980 to US$1,607 million in 1985. There exists a great possibility to further expand the textile and garment trade between China and ASEAN.

ASEAN used to import processed fabrics (garment materials) from Western Europe, the United States, Japan, Asian NIEs, and other regions for garment processing and re-exporting. ASEAN also imports from China fabrics of various kinds, mainly converted fabrics. With China's textile industry, particularly dyeing and printing, gearing up for production, opportunities for ASEAN to increase its imports of Chinese converted fabrics will present themselves (Table 7.19).

TABLE 7.18
Share of Garments in ASEAN's Total Textile Exports
(In percentage)

	1973	1983
Indonesia	25.0	55.0
Malaysia	48.0	57.0[a]
Philippines	32.0	9.0
Singapore	48.0	60.0[b]
Thailand	34.0	57.0

[a] 1982.
[b] 1984.

SOURCES: U.N., UNCTAD, *Handbook of International Trade and Development Statistics, 1984*; U.N., *Statistical Yearbook for Asia and the Pacific, 1984*.

TABLE 7.19
Product Structure of China's Piece Goods Exports to ASEAN, 1983

	Cotton		Polytester/Cotton		Rayon Staple	
	Amount ('000 metres)	Share of Finished Goods (%)	Amount ('000) metres)	Share of Finished Goods (%)	Amount ('000) metres)	Share of Finished Goods (%)
Malaysia	18,146.00	99.2	3,162.40	94.9	1,929.50	80.3
Philippines	1,589.00	100.0	994.80	72.5	—	—
Singapore	59,005.00	94.9	33,555.00	91.1	2,956.50	95.5
Thailand	118.50	0.0	544.30	0.0	—	—

SOURCE: China's General Administration of Customs, *China's Customs Statistics Yearbook, 1983.*

TABLE 7.20
Share of OECD in ASEAN Exports of Textiles and Garments

	ASEAN Total Exports (US$ million)	Exports to OECD (US$ million)	Share of OECD (%)
Indonesia	480	413	86.0
Malaysia	896	459	51.2
Philippines	750	694	92.5
Singapore	890	462	51.9
Thailand	878	738	84.3
Total	3,891	2,765	71.1

SOURCE: *OECD, Trade Statistics*, 1985.

Export Market

As stated earlier, both China and ASEAN have similarly biased their exports towards Western markets, with ASEAN countries showing a higher concentration. According to the 1985 OECD statistics, ASEAN and China exported to more than twenty OECD member countries US$2,766 and US$3,722 million worth of textiles respectively, accounting for 71.7 and 49.4 per cent of their respective exports. The textile exports by ASEAN to the industrialized countries in 1985 is shown in Table 7.20.

It is known that 70 to 80 per cent of the world textile consumption is concentrated in the Western countries. However, markets in developing countries will grow with the economic development of these countries, thus offering a great potential both China and ASEAN countries can tap.

In 1985, world textile export value (including fibre) was about US$125 billion. However the shares of China and ASEAN are both very small and far behind those obtained by Hong Kong, South Korea, and Taiwan. Should China and ASEAN actively participate in their global export strategy and diversify export markets, it would be to their mutual benefit, as it would reduce market competition.

Technical Co-operation

China's textile machinery production has made much progress lately. So far, most of the textile machineries and complexes can be self-manufactured and exported. Some of the technologies used in the cotton textiles are close to maturity with the best being up to international standards. However, in the garment sector ASEAN countries have a technical edge over China. This indicates a possibility for technical co-operation and co-production. The recent import by Thailand of cotton spinning and weaving equipment from China marks a good beginning.

A current issue is the mounting protectionism by the industrialized countries, particularly the United States and the EC. This has seriously impeded the healthy development of the textile industries of China, ASEAN, and other developing countries and could even endanger their textile exports. To counter this problem,

China will have to upgrade its products, develop quota-free items, and also strengthen its multilateral ties with the developing countries to take joint measures against such discriminative restrictions. Only by this can Western countries possibly make certain concessions. On the issue of the Multi-Fibre Arrangement, China and ASEAN should take concerted actions to improve mutual understanding and consultation to contribute to the stabilization and liberalization of the global textile trade.

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8

Trade in Services between ASEAN and China

Chew Soon Beng

I. Introduction

There is a growing body of literature on the services sector in ASEAN. Koh (1985) studied the role of the services sector in ASEAN. Lee (1986) assessed trade in services between ASEAN and the United States. Tucker, Seow, and Sundberg (1983) looked at services in ASEAN-Australia trade. Pang (1985) provided an overview of ASEAN-EC trade in services. The present paper thus complements the existing studies on the services sector in ASEAN as it examines trade in services between ASEAN and China.

It is always difficult to define services as they constitute intangible output. There have been various attempts to define services and yet there is still no agreement among economists as to what constitutes a service (Riddle 1986; Bhagwati 1984; Kravis 1983; Hill 1977; and Smith 1973, among others).

Since the purpose of the present paper is to provide an understanding of the nature and importance of trade in services between ASEAN and China, a broad definition of services is adopted. Following the International Labour Organization (ILO) and Organization for Economic Co-operation and Development (OECD), the services sector comprises wholesale and retail trade, restaurants and hotels, transport, storage and communications, finance, insurance, real estate and business services, public administration and defence, and community and personal services. Trade in services refers to trans-border transactions in services between residents and non-residents. It also includes both trade and investment in services or invisibles in the balance of payments, including factor services such as investment income and workers' remittances.

Specifically, we want to distinguish the following categories of trade in services.

(1) *Factor services and non-factor services.* Factor services are normally defined as the investment income component of services plus requited transfers. The latter consists largely of workers' remittances. Thus, factor services are investment income and workers' remittances. Non-factor services comprise all other invisibles in the balance of payments.

(2) *Services which involve no movement of people.* This group involves the export of a service which is produced in the exporting country and consumed in the importing country, for example international transportation and telecommunications.

(3) *Services which involve movement of producer to consumer.* This group involves services which are produced and consumed in the importing country, for example providing consultancy, legal, accounting, and other services in the importing country.

(4) *Services which involve movement of consumer to producer.* This group refers to services whose production and consumption take place in the exporting country. Tourism is a good example. Another is educational and training services provided to foreigners in the exporting country.

Standard international trade theory states that a country which has a comparative advantage in product X will export product X. Hindley and Smith (1984) argued that the analysis of trade in services does not require a new theoretical framework separate and different from the established theories. Sapir and Lutz (1981) presented a test of conventional trade theory explanation of the pattern of world trade in services using cross-sectional data on the capital-labour ratio, the number of skilled and educated persons, etc. They found that the more developed countries, being relatively better endowed with physical and human capital, have a competitive edge in services trade. Their results, however, cannot be generalized to include, for instance, tourism. Developing countries have a competitive edge in tourism because of their natural resources and abundance of cheap labour to support the tourist industry. Another counter example is the export of physical labour services by developing countries to other countries.

Since the services sector consists of various types of heterogeneous services, the pattern of trade in services is unlikely to be accounted for by one single theory. But the basic trade principle is still valid, that is a country which has a comparative advantage in producing service "A" will sell service "A".

The volume of trade in services between ASEAN and China is quite similar to that between developed and developing countries. ASEAN countries, especially Singapore and Malaysia, have a comparative advantage in exporting managerial and technical know-how to China. Nevertheless, trade in services between ASEAN and China is hindered by the fact that China does not follow the Western concept of services. Orthodox Marxism does not consider services as productive. Indeed, it was a common practice for the Soviet bloc countries to exclude services in the computation of national income (the so-called net material product approach). Recently, the Soviet bloc countries have taken into account freight charges in the computation of national income, but, to a large extent, services are left out.

The Chinese traditionally despise service activities, regarding them as akin to slavery. Services have not been recognized as legitimate economic activities in China until recently. For instance, during the 1966–76 Cultural Revolution, keeping a housemaid was condemned as bourgeois and decadent. Today, the practice of hiring housemaids is catching on in Chinese cities.

China now accepts the services of housemaids as economically productive. According to a party official (*Straits Times*, 10 June 1987), "Housemaids are essential to the growth of a healthy socialist economy. They release from

household chores the better-educated young mothers of China, who are more useful if employed outside their homes." China also now recognizes advertising as having a legitimate economic role. Advertising was allowed in China only after 1979. The Third World Advertising Congress was held in China on 13–20 June 1987 at the Great Hall of the People, indicating that the Chinese Government is seriously promoting its advertising industry.

The change in the Chinese attitude towards the services of housemaids and advertising may reflect their changed attitudes towards the concept of services in general. Such a change in attitude is vital for the development of China's trade in services with foreign countries.

Apart from the concept of services, there are two other problems that hinder trade in services between ASEAN and China. The first relates to patent rights and royalty. Patent rights and royalty are rental income which are not allowed in China. However, the Chinese must accept the Western concept of patent rights and royalty if trade in services is to be promoted.

China does not allow foreigners to own any means of production either. This poses problems for joint-venture investments. Consequently, all joint-ventures in China are limited to a certain period of time, ranging from ten to thirty years.

The second problem concerns the frequent and increased contact with foreigners. An important difference between trade in goods and trade in services is that the former does not require personal contact between the provider and the receiver while the latter requires such personal contact, except in separated services such as international transportation, telecommunication, and insurance policies.

In non-separated services, such as those which involve no movement of people, personal contact between the receiver and the provider of services is inevitable. Such personal contacts on a large scale may pose security problems if trading countries have different political systems. This is one reason why Malaysia and Indonesia have reservations on promoting services trade with China. Malaysia and Indonesia are very unhappy over the Chinese policy of giving moral support to their communist parties. They therefore do not fully encourage frequent contacts of their nationals with the Chinese. Thus, politics precedes economics in trade in services between ASEAN and China.

The focus of this paper is as follows: Section II compares services sectors in ASEAN and China; Section III examines the services trade of ASEAN and China; and Section IV examines trade in services between ASEAN and China. The concluding section discusses the prospects and problems in bilateral trade in services.

II. Services Sectors in ASEAN and China

Table 8.1 shows the sectoral composition of GDP and labour force in the ASEAN countries, and China. In 1985, the services sector accounted for 62 per cent of Singapore's GDP. Thus, Singapore can be classified as a services economy. The

TABLE 8.1
Sectoral Composition of GDP and Labour Force in China and ASEAN, 1965, 1980, and 1985

	% Share of GDP from						% of Labour Force in						GNP per Capita	
	Services		Industry		Agriculture		Services		Industry		Agriculture		US$	Average Annual Growth (%)
	1965	1985	1965	1985	1965	1985	1965	1980	1965	1980	1965	1980	1985	1965–85
China	23	20	38	47	39	33	11	12	8	14	81	74	310	4.8
Indonesia	31	41	13	36	56	24	21	30	9	13	71	57	530	4.8
Malaysia	45	44*	24	35*	30	21*	29	39	13	19	59	42	2,000	4.4
Philippines	46	41	28	32	26	27	26	33	16	16	58	52	580	2.3
Singapore	73	62	24	37	3	1	68	61	27	38	6	2	7,420	7.6
Thailand	42	53	23	30	32	21	13	19	5	10	82	71	800	4.0

*1983 figure.
Agriculture - Agriculture, forestry, hunting, and fishing.
Industry - Mining, manufacturing, construction, electricity, water, and gas.
Services - All other branches of economic activity.

SOURCE: *World Development Report 1987*, Tables 1 and 3.

Thai services sector is also important as it contributes 53 per cent towards the Thai GDP. The contribution of the services sector towards the GDP in Malaysia, the Philippines, and Indonesia are around 41 to 44 per cent.

In terms of contribution towards employment, the sector in Singapore is the largest employer with 61 per cent in 1980. The corresponding figures for the Philippines, Malaysia, and Indonesia are 33, 39, and 30 per cent, respectively. Surprisingly, the services sector in Thailand only accounts for 19 per cent of Thai employment.

The services sector is generally labour intensive, regarded as contributing more to total employment than to total GDP. But this is clearly not the case in ASEAN. For Singapore, the services sector has about the same per cent share of GDP and employment. But in the other four ASEAN countries, the services share of GDP is far greater than the employment share. This implies that the services sectors in these four countries, especially Thailand, is relatively high value added when compared to the agricultural sector.

China, being a socialist country, has a different accounting framework for the computation of its GDP. Nevertheless, the services sector in China in 1985 accounts for 20 per cent of its GDP and 12 per cent of total employment (Table 8.1).

Table 8.2 shows sectoral performances in ASEAN and China. The services sectors in these countries grew at different rates. For Singapore, the annual growth rate of the services sector was 9.7 per cent during 1965–80 and 6.9 per cent during 1980–85. The Indonesian services sector grew at 7 per cent in 1965–80 and 6.3 per cent in 1980–85. The corresponding figures for Thailand are 8.0 and 6.0 per cent respectively. The Malaysian services sector grew at 5.9 per cent in 1980–85, while the Philippine services sector grew 5.2 per cent in 1965–80 and 0.1 per cent in 1980–85. China, which started her open-door policy in 1979, had a growth rate in services of 7.5 per cent for 1980–85.

Table 8.3 shows the composition of the services sector in ASEAN. For Singapore in 1985, the services sector relied on three pillars, namely wholesale and retail trade (22.2 per cent of GDP); transport, storage, and communication (20.8 per cent); and finance, insurance, and real estate (24 per cent). For the other ASEAN countries the trade sector is the largest component of services, ranging from 12 per cent of GDP for Malaysia to 15.7 per cent for Thailand. For China, only two services sectors are measured, namely transport and commerce, which contributed 3.5 and 4.6 per cent respectively towards GNP in 1983.

By and large, the services sector in Singapore is the most advanced and sophisticated in ASEAN. China, being a socialist country and also a latecomer in the services trade, has a relatively under-developed services sector. With respect to trade in services between ASEAN and China, it is obvious that ASEAN could help China develop her services sector and, among ASEAN countries, Singapore is in the best position to do so as she is economically more advanced.

It is reasonable to say that services trade will increase rapidly in the future. As developed countries have a comparative advantage in services trade, they have been pushing for services to be included in the GATT Uruguay Round

TABLE 8.2
Sectoral Performance in China and ASEAN, 1965–80 and 1980–85
(In percentage)

	Average Annual Growth Rate							
	GDP		Services		Industry		Agriculture	
	1965–80	1980–85	1965–80	1980–85	1965–80	1980–85	1965–80	1980–85
China	6.4	9.8	7.0	7.5	10.0	11.1	3.0	9.4
Indonesia	7.9	3.5	7.3	6.3	11.9	1.0	4.3	3.1
Malaysia	7.3	5.5	n.a.	5.9	n.a.	6.7	n.a.	3.2
Philippines	5.9	−0.5	5.2	0.1	8.0	−2.8	4.6	1.7
Singapore	10.2	6.5	9.7	6.9	12.2	5.9	3.1	−1.8
Thailand	7.4	5.1	8.0	6.0	9.5	5.1	4.9	3.4

SOURCE: *World Development Report 1987*, Table 2.

TABLE 8.3
Percentage Share of Services in GDP in ASEAN, 1984–85

Services Sector	Indonesia[a] 1984	Malaysia[b] 1985	Philipppines[c] 1985	Singapore[d] 1985	Thailand[e] 1985
Wholesale and retail trade	15.5	12.1	15.6	22.2	15.7
Transport, storage, and communication	5.5	6.4	5.5	20.8	6.9
Finance, insurance, and real estate	5.5	8.9*		23.7	9.2*
Government services	7.8	12.2	18.3	—	3.9
Other services	4.0	2.3		11.1	11.6
Total services as % of GDP	38.3	41.8	39.4	77.8	47.4

[a]1983 constant prices.
[b]1978 constant prices.
[c]1972 constant prices.
[d]1968 constant prices.
[e]1985 constant prices.
*Includes owner-occupied dwelling.

SOURCES: Singapore, Department of Statistics *Yearbook of Statistics, 1985/86*; Malaysia, Ministry of Finance, *Economic Report 1986/87*; Bank of Thailand, *Quarterly Bulletin* 26, no. 3 (September 1986); for Indonesia and the Philippines, from Asian Development Bank, *Key Indicators of Developing Member Countries of ADB*, July 1986.

negotiations. Some developing countries such as India, Brazil, and Mexico are against having services included in GATT, but ASEAN is agreeable to its inclusion. China is not yet a member of GATT. Nevertheless, as China does not have a comparative advantage in services trade, her position on services trade in GATT is expected to be non-supportive.

III. Services Trade of ASEAN and China

The commodity trade relations between ASEAN and China have been fairly good. The share of ASEAN in China's total trade in 1983 was 3.4 per cent for exports and 4.0 per cent for imports. If the re-exports via Hong Kong are considered, the proportions should be higher. On the other hand, the share of China in ASEAN's total direct trade in 1983 was 1 per cent for exports and 1.9 per cent for imports.

Under normal circumstances, commodity trade and services trade reinforce each other. This, however, is not true in the case of China-ASEAN trade. Although commodity trade between ASEAN and China has been growing in the past twenty years or so, services trade between ASEAN and China started only with the Chinese open-door policy in 1979.

In other words, the Chinese open-door policy provides immense opportunities for many countries, including ASEAN, to have services trade with China.

Unfortunately, there are no official data on services trade between each of the ASEAN countries and China. Consequently, the analysis on bilateral services trade is limited to (a) an examination of balance of trade and services in each ASEAN country and China; (b) some discussion on the extent of services trade between ASEAN and China; and (c) an examination of services trade between ASEAN and China on a case by case basis.

The balance of payments data for each of the ASEAN countries and China is given in Table 8.4. Total services refer to the sum of shipment, other transportation, travel, direct and other investment, other official, and other private flows (labour income is included in other private flows).

In 1985, Indonesia had a deficit of 7,563 million SDRs in services compared to a surplus of 5,787 million SDRs in merchandise trade. Shipment, direct investment income, other investment income, and other private flows top the list of the services imported by Indonesia.

The Malaysian pattern of trade in merchandise and services is quite similar to the Indonesian case. Malaysia is also a net importer of services and a net exporter of merchandise. Direct investment income is the most important service imported, accounting for 33 per cent of the net import of services. Other investment income, other private flows, and travel also constitute important categories of services imported.

The Philippine balance of payments situation is very different from those of Indonesia and Malaysia. The Philippines had a surplus of 114 million SDRs in 1985. Direct investment income, other investment income, and shipment com-

TABLE 8.4
Balance of Merchandise and Services Trade in China and ASEAN, 1985
(In million SDRs)

	China	Indonesia	Malaysia	Philippines	Singapore	Thailand
Receipts						
Merchandise Export	24,729	18,180	14,909	4,564	21,175	6,957
Shipment	854	0	388	164	696	334
Other transportation	621	41	445	36	1,925	122
Travel	964	540	594	502	1,727	1,153
Direct investment income	6	0	24	13	0	5
Other investment income	1,360	756	553	342	1,754	234
Other official	128	0	98	364	98	138
Other private	531	191	513	1,825	1,910	1,102
Labour income	90			686		
Total Services	4,464	1,528	2,615	3,246	8,110	3,088
Total Receipts	29,193	19,708	17,524	7,810	29,285	10,045
Payments						
Merchandise Imports	37,653	12,393	11,388	5,042	24,164	8,295
Shipment	1,273	1,365	1,075	336	1,357	1,066
Other transportation	295	308	457	38	0	128
Travel	309	550	1,146	36	606	275
Direct investment income	14	2,545	1,503	131	0	51
Other investment income	524	2,138	1,322	2,186	1,510	1,596

TABLE 8.4 (*Continued*)

	China	Indonesia	Malaysia	Philippines	Singapore	Thailand
Other official	259	111	88	22	35	41
Other private	349	2,074	1,229	383	1,691	299
Labour income	0			1		
Total services	1,750	9,091	6,820	3,132	5,199	3,456
Total payments	39,403	21,484	18,208	8,174	29,363	11,751
Net Receipts (Payments)						
Merchandise Trade	−12,924	5,787	3,521	−478	−2,989	−1,338
Shipment	−419	1,365	−687	−172	−661	−732
Other transportation	326	−267	−12	−2	1,925	−6
Travel	655	−10	!552	466	1,121	878
Direct investment income	−8	2,545	−1,479	−118	0	46
Other investment income	836	1,382	−769	−1,844	244	−1,362
Other official	−131	−111	10	342	63	197
Other private	182	1,883	−716	1,442	219	803
Labour income	90			685		
Total services	2,714	7,563	−4,205	114	2,911	−368
Services/Merchandise Ratio (%)						
Receipts	18.05	8.4	17.5	71.1	38.3	44.4
Payments	4.65	73.4	59.9	62.1	21.5	41.7

SOURCE: IMF, *Balance of Payments Statistics Yearbook, 1985.*

prise the three main services imported by the Philippines. But, in contrast to Indonesia and Malaysia, other official, other private flows (which includes labour income), and travel are the main services exported by the Philippines.

Singapore, being a city state, is expectedly different from the other ASEAN countries and China in the structure of its balance of payments. Singapore is a net importer of merchandise and a net exporter of services. The main services exports are transportation, travel, and other private flows. Singapore is a net importer of shipment services.

Thailand is a net exporter of merchandise and a net importer of services. The deficit in services trade was 368 million SDRs in 1985. Other investment income and shipment are two important categories of services imported by Thailand, while services exported comprised mainly other private flows and travel.

China experienced a deficit of 12,924 million SDRs in merchandise. On the other hand, it is a net exporter of services. The main export earning-categories are other investment income, travel, and other transportation. China is a net importer of shipment services.

As data on services trade between each ASEAN country and China are not available, only a qualitative discussion on services trade between ASEAN and China is attempted here.

All ASEAN countries, including Singapore, are importers of shipment services. It is therefore unlikely that trade in shipment services between ASEAN and China is significant.

China, the Philippines, Singapore, and Thailand are net exporters of travel services. Malaysia and, to a much lesser extent, Indonesia are net importers of travel services. Table 8.5 shows that, in 1983, 36,000 Filipinos and 23,000 Thai went to China and the number of Chinese who visited Thailand, the Philippines, and Malaysia in 1983 were 116,211, 3,026, and 439 persons respectively. There are Singaporeans going to China for tours and for business but the data are not available.

China and Singapore are net exporters of "other transport services" while Indonesia, Malaysia, the Philippines, and Thailand are net importers. "Other transport services" actually reflect the intensity of economic ties between the host and foreign countries. As the economic ties between each ASEAN country and China are not strong, one would not expect the volume of trade in "other transport services" between ASEAN and China to be significant.

China, Singapore, the Philippines, and Thailand are net exporters of "other private flows". The main item here is labour income. But we know that the number of Chinese workers is not significant in ASEAN. Likewise the number of ASEAN workers in China is negligible. Thus, trade in "other private flows" between ASEAN and China is also limited.

Indonesia, Malaysia, the Philippines, and Thailand have net payments of direct investment and other investment income. Singapore has net imports of other investment income, while China has net exports of other investment income. But, since bilateral investments between ASEAN and China are not large, the ASEAN-China investment income flows would likely be small.

TABLE 8.5
China-ASEAN Tourist Arrivals, 1983

From \ To	China[1]	Indonesia[2]	Malaysia[3]	Singapore[6]	Thailand[8]	Malaysia[3]	Total
China			439	3,026		116,211[9]	119,676
Indonesia			34,143	7,786	296,082	26,387	364,398
Malaysia		42,833		18,158	488,881[7]	576,116	1,125,988
Philippines	36,000	6,235	13,052		63,431	37,063	155,781
Singapore	n.a.	95,671	1,770,772[4]	27,460		120,879	2,014,782
Thailand	23,000	6,285	340,623	11,725	171,203		552,836
Total	59,000	151,024	2,159,029	68,155	1,019,597	876,656	4,333,461

NOTES:
Definition of:

(1) Visitor - Any person visiting a country other than that in which he has his usual place of residence, for not more than one year and whose main purpose of visit is other than following an occupation renumerated from within the country visited.

(2) Tourist - That is, visitors as defined above staying at least twenty-four hours, but not more than one year, in the country visited and the purpose of whose trip can be classified under one of the following headings: a) pleasure, recreation, holding, and sport; b) business, visiting friends and relatives, mission, meeting, conference, health, studies, and religion.

(3) Excursionist - That is, visitors, as defined above, staying less than twenty-four hours in the country visited (including cruise passangers).

[1]International tourist arrivals at frontier by country-nationality.
[2]International visitor arrivals at frontier by country-residence.
[3](i) International tourist arrivals at frontiers by country-residence; (ii) Departures.
[4]Including countries and day-visitors from Singapore crossing the frontiers by road through the Johore Causeway.
[5](i) International visitor arrivals at frontier by country-residence; (ii) Including arrivals of nationals residing abroad: 1983: 65 013.
[6]International tourist arrivals at frontiers.
[7]Excluding arrivals of Malaysian citizens by land.
[8]International visitor arrivals at frontiers.
[9]Includes both China and Taiwan. In Pacific Area Travel Association, *Annual Statistical Report 1984*; Taiwan's visitors arriving by residence to Thailand is 6,744 visitors.

SOURCE: World Tourism Organization, *World Travel and Tourism Statistics Yearbook 1983–84*, vol. 38.

IV. Trade in Services between and ASEAN and China

1. Indonesia

Economic relations between China and Indonesia were frozen for two decades since 1967. Direct trade relations between Jakarta and Beijing resumed in July 1985 when a memorandum of understanding was signed. China has signed a US$13-million contract with Indonesia for the counter-purchase of 100,000 tons of Indonesian cement for 400,000 tons of coal (*China Trade News*, 1 October 1986). China has permitted ships flying the Indonesian flag to carry cement to China and coal to Indonesia. Such an arrangement would certainly facilitate more counter-trade between the two countries.

China and Indonesia understandably want more counter-trade with each other for the following reasons:

1. *Exchange rate fluctuations.* China devalued the renminbi by 13.6 per cent in July 1986 while Indonesia also devalued the rupiah by 45 per cent. Counter-trade would avoid problems caused by the devaluation of currencies.
2. *Both countries suffered a sharp decline in oil revenue.* Both China and Indonesia want to export more of other commodities to compensate for the losses in oil revenue.

In August 1985, Indonesia opened to Chinese vessels two ports in Java, one in Sumatra and one in Celebes. Moreover, certain banks have been approved to finance the bilateral trade between the two countries. These two measures would facilitate and reduce the cost of business for both parties. But in terms of actual business, not much has taken place (*China Trade News*, vol. 23 [October 1985]).

Basically, Indonesia is not ready to establish full economic ties with China. Equally important is the fact that business opportunities in services trade are also quite limited between the two countries. This is so because both China and Indonesia do not have a comparative advantage *vis-à-vis* each other in the export of services.

2. Malaysia

Malaysia undoubtedly has the expertise in medium-level technology in the cultivation and processing of primary products to play a role in the Chinese modernization programme. However, despite the China visit by the Malaysian Prime Minister in November 1985, Malaysia's trade with China is still very much on a government-to-government basis, and the people-to-people business relationship is still lacking.

The main reason for the slow growth of bilateral economic relations between the two countries is politics. Malaysia is still not fully satisfied with China's stance on her moral support for the Communist Party in Malaysia. Consequently,

Malaysians cannot visit China freely. And in order for businessmen in Malaysia to import from China, they have to apply for import permits. For Malaysian businessmen to go to China to do business, the following procedures are involved:

1. The businessman must get a letter of invitation from China.
2. With the letter of invitation, he will submit his application for a visa to visit China to the Ministry of Trade.
3. The Ministry of Trade will assess his application, with feedback from the Malaysian Trade Commission in Beijing. The criterion for approval is that the businessman must convince the Ministry of Trade that he needs to visit China for business.
4. The Ministry of Trade will then submit a report to both the Ministry of Home Affairs and the Ministry of Foreign Affairs. The Ministry of Foreign Affairs will usually accept the report from the Ministry of Trade at face value. The Ministry of Home Affairs will process the application from the point of view of security. If the Ministry of Trade submits a favourable report, the Ministry of Foreign Affairs will approve and, in most cases, the Ministry of Home Affairs will also approve.
5. Once clearance is obtained from the Ministry of Home Affairs, a visa for the businessman to go to China for a period of two weeks will be issued. The whole process of visa application takes about one to two months.
6. On returning from China, the businessman must submit a report to the Ministry of Trade. This report is very important especially if the businessman needs to make subsequent visits to China to follow up on the business deals. The Ministry of Trade must be convinced that the business potential is good, and that the businessman needs to go to China for follow-up visits.
7. If the businessman needs to go to China again for a follow-up visit (not a fresh application), he has to apply to the Ministry of Trade again, repeating the whole process. Since it is a follow-up visit, a multiple-entry visa to China will be issued for a period of up to six months. The time it takes to apply for multiple-entry visa for the purpose of follow up visits is three weeks to one month.
8. For holiday tours, any person aged 60 or more can visit China.

Malaysia is also not ready to establish full economic ties with China. On June 1985, Dr Mahathir warned against holding too many illusions regarding the China market. He added that China would not be a huge market for the world's exports because the Chinese leaders would not allow unlimited imports of consumer or even capital goods (*Straits Times*, 5 June 1985).

The following are some examples of trade in services between China and Malaysia:

1. Taisei Corporation of Japan and RKB Ltd of Malaysia will co-operate to build a hotel in Beijing with the Minmetals and Sejiqing Agricultural Co-operative of China. The hotel is worth US$33.8 million (*China Business Review*, 24 June 1985).

2. Malaysia's Perusahaan Tinggi has signed an agreement with the Zengchou Liquefied Natural Gas Control Department of Henan province to jointly manufacture gas stoves in China (*China Trade Report*, vol. 25, [May 1987]).

Malaysia undoubtedly has a comparative advantage in exporting medium-level technology in cultivation and processing of primary products and also in consultancy services such as management, accountancy, etc. However, Malaysia is very cautious in promoting services trade with China which involves movement of either provider or user.

3. Philippines

Services trade between the Philippines and China is mainly in banking, construction, and air-services.

Banking
The Philippine National Bank has an office in Beijing. The business activities include liaison, consultation, and other services for banking business (*Almanac of China's Foreign Economic Relations and Trade, 1985*).

Construction
The following comprise the Philippine-China trade in construction services:

1. A Philippine-Chinese joint-venture to construct a 350-room luxury hotel in Guangzhou has been set up. The total investment is US$60 million with 49 per cent Philippine equity (*China Business Review* 1, no. 1 [January-February 1983]).
2. Metro Manila has signed a letter of intent for the construction of a hotel cum commercial building complex in Shanghai (*China Business Review* 10, no. 5 [September-October 1983]).
3. A Philippine-Chinese joint-venture to build a hydroelectric power station for the Magat River project has been set up. The total investment of the project is US$2.2 million (*China Business Review* 10, no. 6 [November-December 1983]).
4. A Philippine-Chinese joint-venture to supply equipment for a heat and power station and the design of a power plant in China has been set up. (*China Business Review* 9, no. 5 [September-October 1982]).
5. The Philippine State Irrigation Bureau has won the tender for construction of a 6,000-kilowatt hydropower station in China. The contract is worth US$3 million (*China Business Review* 11, no. 1 [March-April, 1984]).

Air Services
The Civil Aviation Administration of China (CAAC) has begun a regular two-hour flight between Manila and Xiamen in Fujian Province (*China's Foreign Trade*, Issue No. 11 [1986]).

The Philippines has a comparative advantage in exporting hotel management services to China.

4. Singapore

The Singapore Commercial Representative Office (CRO) in China is well established to promote economic relations between China and Singapore. The activities of the CRO include seeking business opportunities for Singaporeans, organizing seminars in China, providing market information, keeping the Trade Development Board in Singapore informed, arranging contacts between Singaporeans and Chinese officials, etc.

The CRO has been promoting the following business areas in the past a few years: entrepôt trade, petroleum/petrochemicals, industrial equipment, computers, building engineering, infrastructure engineering, civil aviation services, financial services, exhibition management, tourism, hotel management, trading in China technologies, and counter-trade services.

Economic relations between China and Singapore are strong. Singapore and China have joint-ventures in ninety-one projects worth a total of S$414 million as at the end of 1985. This figure indicates that among ASEAN countries Singapore has the most economic links with China (*Business Times*, 17 April 1986).

Singapore Strategies on Doing Business with China

The Singapore Government provides the infrastructure and support to Singaporeans to trade with China. The following are some of the efforts in strengthening economic ties with China:

(1) A delegation from the Singapore Federation of Chambers of Commerce has signed preliminary agreements for a series of co-operative ventures with Chinese enterprises. Letters of intent and memoranda signed covered many areas, such as joint-managed supermarkets, building materials, textile computer equipment, fishery, cigarette factories, and hotel building (*Business Times*, 9 April 1984).

(2) The Third China Business Conference was organized by AGS Management Consultants and Ecotech. China signed twenty-three memoranda of agreement or letters of intent covering 106 investment projects with Singapore businessmen at the above conference. Some of the largest projects are a hotel with 600–700 rooms in Sichuan province (S$66 million), the modernization of a chemical plant in Liaoning province (S$60 million), and a container terminal in Tianjin (S$44 million) (*Straits Times*, 6 August 1985).

(3) The investment protection and promotion agreement between Singapore and China was signed in Beijing in November 1985 for a fifteen-year period. It will be automatically renewed at the end of the term unless one of the parties decides to end it. Business interests will be enhanced by such an agreement which will promote and protect investments in the two countries. Because of the agreement, foreign companies whose governments do not have such an arrangement will now find it worthwhile to use Singapore as the gateway to China. Among its

main provisions are that the two countries are required to give each other most-favoured-nation treatment as follows:

a. Investment should be protected against expropriation or nationalization which can only be made by law and with proper compensation.
b. This compensation must be given without unreasonable delay and must be convertible and transferable.
c. Investors can also repatriate their capital and profits from investments subject to the laws of the countries.
d. Should there be investment disputes, the agreement provides for settlement through the setting up of an international arbitration tribunal. As much as possible, the arbitration shall take place in Singapore (*Straits Times*, 23 November 1985).

(4) The Trade Development Board has awarded a cash grant to five professional bodies which have teamed up to sell their expertise to China. The five bodies — Association of Consulting Engineers, Institution of Engineers, Singapore Institute of Architects, Singapore Institute of Planners, and the Singapore Institute of Surveyors and Valuers — represent 529 firms. The group is prepared to undertake a two-year programme which costs S$273,000–S$136,500 from the cash grant and the remainder from the five bodies. The expertise the group is offering in China covers urban development planning and development of ports and airports. The groups would also be able to take on projects to develop and manage hotels and to design housing and industrial estates.

Problems in doing business with China include:

a. length of time needed for contracts to be approved;
b. problem of interpreting Chinese laws;
c. restriction on foreign exchange;
d. repatriation of profits;
e. shortages of material supplies;
f. the availability of quality of labour; and
g. political risk (*Business Times*, 25 May 1985).

Two of the many things obstructing co-operation between Western companies and China are the language barrier and the Chinese way of life and thinking. Since many Singaporeans speak both English and Chinese and also understand the Western way of life and thinking as well as that of the Chinese, Singapore businessmen can play an important role in helping Western companies set up joint-ventures in China (*Straits Times*, 4 May 1984).

On the other hand, Singaporean businessmen were told that they must know how to wrap up a total deal. In structuring a deal with the Chinese, the important thing is to put the financial aspect, management, and administration together. This is more important than having the hardware or the technology. Most people, including Singaporeans, put too much emphasis on scientific know-how (*Straits Times*, 17 December 1984).

The main difficulty in selling services in China is that the Chinese company does not have the ability to pay for services in foreign exchange. Two ways have

been suggested for the Singapore partner to overcome the problem. One arrangement is for the goods made by the joint-venture project in China to be exported to Singapore. The other arrangement is if the goods are sold in China, the renminbi earned could be used to buy other goods for which there are markets outside China.

The Extent of Singapore Involvement in Selected Services

Entrepôt Trade. Singapore is in a position to play the role of entrepôt between China and other countries. For instance, Singapore is playing a role in indirect trade between Taiwan and China since Taipei bans any direct contact. But it is estimated that purchase orders by Singapore traders with Taiwan factories in May 1985 rose by 98 per cent over the month of April 1985 to S$279 million. Most of the goods went to China (*Straits Times*, 22 June 1985).

Hunan province in China is turning to Singapore to process, pack, and re-export its products. Hunan's exports to Singapore totalled S$11 million in 1984. The volume amounted to 2 per cent of Hunan's total exports.

Acmes-Kings Corporation has a joint-venture with the Yunnan branch of China Machinery and Equipment Corporation (CMEC), with the Chinese partner holding 49 per cent of the equity. The joint-venture functions mainly as a purchasing and sourcing agent. Since trading started, about S$10 million worth of cast iron products have been imported into Singapore from Yunnan. The new joint-venture has an expected annual turnover of S$20 million initially. Acmes-Kings is also planning to expand her activities from sanitary products to arts and crafts products, including brush paintings, calligraphic works, seal stones, and carpets. Acmes-Kings is also very keen in developing the fast-food business in China (*Business Times*, 8 January 1985).

Building Construction and Town Planning. Services rendered by Singapore companies include major building construction projects in China. According to the Trade Development Board, Singapore contractors are involved in over S$500 million contracts in China. An indication of Singapore's involvement is that International Development and Consultancy Corporation (INDECO) will station up to seventy Singapore engineers in China over the period 1987–89.

In December 1986, a contract was signed between the Chinese authorities and INDECO for two cities: Xiamen and Fuzhou. The work involves providing consultancy services in city planning and urban design of the city centre in both cities.

Prior to this, a core team led by Mr Liu Tai Ker of the Housing and Development Board visited both cities in August 1986. The eight-member core team comprised the manager, company secretary, senior professionals, planners, architects, and traffic engineer. They maintained a close liaison with the Chinese authorities and achieved good results through frank discussion and periodic review of the work.

The Singapore team is expected to offer their expertise in the following areas: conceptualization of ideas and formulation of plans to meet the Chinese vision

and growth needs; review of the concept and proposals with the authorities; and addition of new ideas to strengthen and improve the plan to accommodate the future needs of the city. The consultancy periods are about one and one and a half years for Xiamen and Fuzhou respectively. Unfortunately, the dollar amount of the contract was not disclosed.

Earlier in 1985, Singapore was asked to propose a package deal to design and build an industrial or housing estate (*Straits Times*, 24 September 1985). Local architects, planners, and contractors were delighted at the prospect of building a new town in China but wanted the government to take the lead. Most of them were anxious about financing and the repayment terms that had to be negotiated with the Chinese authorities. A government-to-government deal would provide the most suitable framework for the project. Private sector architects argued that the Housing Board and Urban Redevelopment Authority could play an important role at the macro and official levels, and the private sector at the micro level. Many contractors also welcomed the opportunity of doing projects in China as the slow-down in building activity in Singapore had forced many to look for projects abroad. However, many of them worry about China's ability to pay in foreign exchange.

Veneer Products (VP) has signed a joint project with Yue Hwa Enterprises of Shenzhen for a S$400-million warehousing and cold complex in China's Shenzhen Special Economic Zone (*Business Times*, 19 January 1984). Under the joint-venture agreement, the Chinese authorities will provide about two square kilometres of land for the complex, while VP will be responsible for the project's development, construction, management, operation, and finance. VP has managed to obtain full financing for the first phase of the project from the Hong Kong office of the First National Bank of Chicago. The exact amount secured is not known but 80 per cent of it is guaranteed by the Guangdong Trust and Investment Corporation, with the remaining 20 per cent backed by the Hong Kong arm of the Bank of China.

Hotel Management. Singapore's Intraluck group has signed a contract to build a 229-room three-to-four-star hotel at Waizhou, Shenzhen. The group, which will manage the hotel itself, has formed a Hong Kong subsidiary to develop the S$12.85-million project with the Hong Kong Wing On Travel Group and the China Travel Service Bureau.

The financing, half in cash and half in loans from Hong Kong banks, is provided by the Singapore and Hong Kong parties, while the Chinese party provides the 10,000-square metre site.

Another local consortium will help build a S$64-million hotel in Chengdu, Sichuan province. The Singapore partner in the joint-venture with the province is Wusang Engineering Pte. Ltd, an air-conditioning contracting firm. The firms, however, will form a consortium with companies which have hotel management and property development experience.

Active Building and Civil Construction (ABCC) managed to confirm a joint-venture with the Tianjin Travel and Tourism Corporation on a 300-room, US$25-million hotel project recently and is negotiating for another hotel of similar

size and value in Beijing (*Business Times*, 2 April 1984). ABCC has also signed a preliminary agreement (something like an approval in principle) with the Tianjin International Trust and Investment Corporation to build the 28-storey Tianjin International Trade Centre at an estimated cost of US$30 million. The project will be handled on a joint-venture basis with one of America's leading contractors for high-rise buildings, Blount International. The partnership was formed because the Americans were keen to join a company which has close cultural affinities with the Chinese. For ABCC, working with a partner would spread risks and it would have additional new resources to call on.

Services in Oil Exploration. A general manager and two deputy managers from Singapore were responsible for the operation of the Chiwan oil exploration support base in China for the first two years. After this period, an official from the China Nanshan Development Company Ltd., a major shareholder in the joint-venture (70 per cent), took over as general manager. The deputy managers will continue to come from the Off-shore Joint Services Company of Singapore, which is a nine-member consortium made up of Intraco Ltd., Far East-Levingston Shipbuilding, Wah Chang International Corporation, Singapore Offshore Petroleum Services, Baker Marine, Jurong Town Corporations, Sembawang Holdings, Promet, and the Neptune Orient Lines (*Straits Times*, 10 August 1984).

Exhibition Management Services. In 1986, one out of every three international exhibitions in China had some Singapore service content. There were about 250 international exhibitions in China in 1986. Each average show had a budget of over S$5 million, making international shows in China a billion-dollar business. It is estimated that there would be 200 international exhibitions in China in 1987.

For instance, two Singaporean companies were appointed by the Tianjin sub-council of the China Council for the Promotion of International Trade (CCPIT) to help China attract foreign investment and expand trade (*Business Times*, 9 February 1984). The AGS Management Consultants and Exhibition Management Services (CEMS) will organize a series of international investment meetings for both Chinese authorities and foreigners to negotiate joint-ventures, licensing agreements, and technology transfer.

Shipbuilding. Singapore's Intraco has signed a letter of intent with the China State Shipbuilding Corporation to enter into a trade agreement. Although the agreement covers trading of marine products, there are also non-marine products. Marine products include shipbuilding, shiprepairing, construction of oil-rigs and offshore platforms, drilling rigs, and manufacture of marine equipment. Non-marine products cover steelworks, welding, electronics, hotel construction, trade centres, machine, textiles, food, and medical equipment and the manufacture of electrical home appliances such as refrigerators, washing machines, and kitchen utensils (*Straits Times*, 1 May 1985).

Metalock (Singapore) Pte Ltd signed a joint-venture with Shanghai Ocean Shipping Repair Dockyard Corporation in 1983. Under the agreement, Metalock provides training, technology, and equipment in return for a fee, based on a

percentage of revenue. In 1984, Metalock trained several Chinese technicians in Singapore and sent S$1 million worth of equipment to Shanghai. The transfer of know-how enabled Metalock to undertake specialized jobs to recondition and repair marine engine parts such as pistons, cylinder covers, and ship propellers in Shanghai. In 1985, Metalock also had two more joint-ventures with shipyards: one with Dalian and the other with Qingdao under agreements similar to the first one (*Business Times*, 25 May 1985).

Translation Services. Providing translation and interpreting services for businessmen wanting to do business with China has been an important source of business for Interlingua, a company in Singapore specializing in bridging the language gap. Over the past months, Interlingua has done several contracts, each worth S$50,000 in translation from and into the Chinese language. The bulk of the work has been for the oil industry (about 4,000 pages), with the computer industry gaining in importance (about 1,000 pages). Although turnover was expected to grow by 3 to 4 per cent per year, Interlingua is hampered by lack of qualified translators and interpreters (*Business Times*, 25 May 1985).

Computer Services. The Singapore National Computer Board (NCB) and the Singapore Federation of Computer Industry (SFCI) have signed an agreement with China's Ministry of Electronics Industry providing a framework for long-term collaboration in information technology that covers training and development of software and international markets. The details of the agreement were not disclosed.

China seeks transfers of software technology from Singapore in computer because Singaporeans speak Mandarin, Singapore has good application systems and expertise which are useful models for China, and Singapore is also regarded by the Chinese as a springboard into the world market for software and services at a later stage (*Business Times*, 4 January 1986).

Far East Computers (FEC) has signed agreements with Fudan University in Shanghai and Academy Sinica in Beijing to sell computers to two educational institutions in China. FEC has been able to sell in China because of the following reasons: (a) the two Chinese partners have agreed to provide engineering support to the Chinese customers while FEC does the marketing; (b) FEC will train Chinese engineers to do support work; and (c) FEC is able to provide training in Mandarin.

A government-owned Singapore Computer Systems (SCS) has opened a subsidiary office in Hong Kong to spearhead its drive into the computer market in China. The SCS felt that the only effective way to compete for business in China was to use Hong Kong as a base because of its close proximity to China and the SCS wants a permanent presence in Hong Kong to maintain the computer hardware.

The SCS will not only develop software, but also sell turnkey computer systems as well as hardware and software products for mainframe and mini computers. The company hopes to team up with hardware vendors so that they can provide the software. The other alternative is to provide turnkey solutions in a joint-ven-

ture with a Chinese firm. Prospects for the SCS are good as China has many computers but lacks software support. Moreover, China prefers to deal with a government-owned company (*Straits Times*, 8 July 1985).

Design and Engineering Services. Two Singapore building companies (Wah Chang International Group and Lim Kah Ngam Ltd.) have firmed up a joint-venture with the Tianjin Building Authorities to provide design and engineering services for a building in Tianjin (*Straits Times*, 15 June 1985).

According to sources, there will be no problems in repatriating the Singapore companies' profits as the Chinese partners have already arranged the foreign exchange certificates in U.S. dollars. Foreign investors in China must apply for special permits to repatriate their profits if the earnings are in renminbi. The two companies have considerable business links in China. Wah Chang already has several joint-venture projects in the China offshore oil industry. In April 1984, it was engaged to set up the biggest fabrication yard in China for offshore production platforms in the South China Sea and a nuclear plant in Guangdong Province.

In 1985, Singapore lost to a Dutch firm the contract to provide the master plan for Hong Qiuo Airport in Shanghai. But Singapore was picked to provide consultancy service for design review, project management, and the running of the airport when it is completed.

In 1987, Singapore's INDECO won a consultancy contract to plan and design the extension of Nanjing Airport in Jiangsu province. Phase I of the development involves construction works estimated to cost S$60 million (*Straits Times*, 20 June 1986).

Factory Upgrading. A Singapore-based company (Representations International) has won a contract to improve the production capacity of Chinese cigarette factories with modern machinery. The contract is worth S$16 million (*Business Times*, 6 June 1985).

A letter of intent has been signed with a Singapore company to manufacture melamine products in the province of Yunnan in China. The deal, when completed, would require the Singapore company to supply the machinery and equipment as well as production know-how (*Business Times*, 16 June 1985).

It is estimated that 400,000 factories in China need to be upgraded. The main problem lies in their ability to pay in foreign exchange to foreign companies. If Singaporean businesses can find ways to overcome the foreign exchange problem, the potentials for them to upgrade Chinese factories are unlimited.

Tourism. There are no available figures on tourism services being sold to China directly or indirectly. But China's tourism plan calls for a substantial increase in tourist arrivals and revenue. Large numbers of mid-level Singaporean managers are now employed in various international hotels in China.

In June 1987, the Chinese tour agency in China was allowed to open a branch in Singapore. The branch, Singapore China Tour Agency, will further promote tourism between the two countries.

Banking Services. There are two Chinese banks in Singapore, the Bank of China (BOC) and Kwangtung Provincial Bank (KPB). The BOC Singapore branch was established in June 1936. It is a fully licensed bank with three sub-branches. The KPB Singapore branch was set up in 1939 and has one sub-branch. The total assets of the Singapore operations of these two Chinese banks amounted to about S$4 billion as at the end of February 1987. However, only the BOC has Asian Currency Unit (ACU) capabilities. The main activities of these two banks are in deposits, non-bank loans, and inter-bank transactions.

Three of Singapore's four local banks have established operations in China: Overseas Chinese Banking Corporation (OCBC) has a branch each in Shanghai and Xiamen; Overseas Union Bank (OUB) has representative offices in Beijing and Shenzhen; while United Overseas Bank (UOB) has a branch in Xiamen and a representative office in Beijing.

With the financial reforms in China, the use of foreign funds to finance China's economic and infrastructural development has become more prevalent. Various Chinese financial institutions and commercial enterprises have raised funds in major overseas financial centres, through syndicated loans and bond issues. A number of Chinese institutions have raised or are in the process of raising bond issues in Singapore. Some of these institutions are: Fujian Investment and Enterprise Corporation, US$50 million fixed rate bond issues; Bank of China, US$200 million floating rate note issue; and Peoples' Construction Bank, US$150 million floating rate note issue.

The Chinese financial institutions, including the Peoples' Bank of China, have indicated their interest in sending their staff to Singapore for training. Singapore banks and the Institute of Banking and Finance have made certain proposals on training. The Chinese find Singapore a suitable place to send their staff for training as the latter poses a minimum of language and cultural barriers.

Gateway to China. Singapore is considered as a possible base for trade with China by some West German companies. These companies can combine their high level of technological know-how with the Singapore electronics industry and China's manufacturing ability in a partnership. The West German Government is encouraging its medium-sized industries to enter into joint-ventures with Singapore firms because Singapore has the right infrastructure for these industries to move into the China and ASEAN markets (*Straits Times*, 5 May 1984).

A senior Australian trade official was reported as saying that Australia has a definite advantage in the construction of power stations, specialized rails for industrial use, material handling equipment, ports, and telecommunication facilities. But, Australian companies must team up with Singapore companies if they want to penetrate the Chinese market (*Business Times*, 26 February 1985).

Denmark also hopes to use Singapore as a base for conducting business with other countries, especially China. China could benefit from Danish technology, especially in the agricultural field including farming and food processing, as well as technology engineering and support services such as finance and medicine (*Business Times*, 23 March 1985).

South Korean businessmen, hampered by the absence of direct trade ties with China, have been urged to use Singapore as a base for the rapidly growing China

trade. Joint-venture companies between Korea and Singapore should be set up to manufacture industrial products such as electronics and telecommunication equipment, and provide construction and engineering services. These products and services could be marketed in China and other countries (*Straits Times*, 17 July 1985).

Singapore and Finland could co-operate in computer software development, industrial design, and education programmes in the services industry. There are also opportunities to work together in other areas, such as fibre concrete technology for construction and telecommunication technology. Finnish engineering skills could be complemented with local financial and trading expertise to benefit from the ongoing process of modernization in China (*Business Times*, 21 January 1986).

The EDB has urged Swedish and Italian firms to use Singapore as a subcontracting base to penetrate into the Chinese market (*Business Times*, 10 September 1986).

Merchant Trading Pte. Ltd. in Singapore has signed a S$21.2-million contract for the supply of power generation plants to China. Although the bulk of the contract will go to the five West German suppliers, the Singapore company will earn a 3 per cent commission.

Chee Kent Investments Pte. Ltd. (CKI) has joined the Guangdong Development Ltd. (GDC) to promote and co-ordinate investment in Guangdong province. CKI will act as GDC's agent and representative to promote investment in the province. CKI is also expected to help enterprises in Guangdong sell their products to overseas markets and handle imported raw materials for processing (*Business Times*, 17 December 1985).

5. Thailand

Thailand has good economic ties with China. There are no restrictions limiting Thai nationals from visiting China. Below are some examples of economic co-operation between the two countries.

1. A Thailand-China joint-venture to construct a hotel in Lushan County. The total investment of the project is US$250,000 with 25 per cent Thai equity (*Almanac of China's Foreign Economic Relations and Trade,* 1985).
2. A Thailand-China joint-venture to renovate the Guest House in Shantou. The total foreign investment is US$1,013,000. (Duration: fifteen years; approved date: 1983/11) (*Almanac of China's Foreign Economic Relations and Trade*, 1984).
3. A Thailand-China joint-venture to construct a resort hotel in Shenzhen. The total investment is US$30 million (*China Business Review* 9, no. 6 [November-December 1982]).
4. A Thailand-China joint-venture to construct 300-kilometre highway linking the Shenzhen and Shantou special economic zones (SEZs) (*China Business Review* 14, no. 2 [March-April 1987]).

5. A Thai company has signed an agreement with the Chinese authorities to form a company to handle passenger and freight shipping between Shantou and Hong Kong (*China Business* 10, no. 6 [November-December 1983]).
6. An agreement on scientific and technical co-operation between China and Thailand has been signed (*China Business Review* 9, no. 3 [May-June 1982]).
7. A new airport in the Shantou SEZ was opened to foreign passengers on 17 January 1987. The Chinese airline, CAAC, will run chartered flights from Shantou to Hong Kong and Bangkok.
8. Thailand has also signed agreements with China on investment protection and on establishing a joint committee on economic co-operation (*China Business Review* 12, no. 4 [July-August 1985]).

V. Prospects and Problems in ASEAN-China Services Trade

The pattern of services trade between the five ASEAN countries and China reflects the comparative advantage of the six countries. Singapore's involvements in China have been mainly in services and are largely knowledge-based.

1. Prospects

China is a latecomer in the services trade as she implemented her open-door policy only in 1979. It is therefore expected that ASEAN could export various services to China rather than the other way round.

Being a communist country and a centrally planned economy for over three decades, much needs to be done by the Chinese authorities to facilitate services trade with foreign countries. China has recently undertaken the following measures with the objective of attracting foreign technology via joint-ventures.

1. The Chinese Government has set up a special agency to co-ordinate and administer its counter-trade operations. As China does not have sufficient foreign exchange, counter-trade is an effective way to promote the country's foreign trade. A form of counter-trade is counter-purchase where exporters have to simultaneously purchase some Chinese goods. According to a deputy director of China's Import-Export Bureau, the counter-trade practice has played an important role in upgrading a great number of small and medium enterprises in China (*Straits Times*, 11 September 1986).
2. China has signed double taxation avoidance pacts with fifteen countries, including Singapore and Malaysia.
3. The Managing Director of China International Economic and Technical Co-operation Consultants Incorporated (Ecotech), Mr Li Zhaoli, stated that China is now improving its legal system, and has set up and promulgated more than forty economic laws and regulations to protect the interests of foreign investors. China has signed investment protection agreements with more than ten countries, apart from double taxation avoidance pacts (*Straits Times*, 30 July 1985).

The prospects for ASEAN exports of services to China are very promising in certain areas. These are discussed below.

Factory Upgrading

There about 400,000 enterprises in China that need to be upgraded. For most of them, it is not necessary to have more capital investment to raise efficiency, as higher productivity can be achieved through better management and technical know-how. According to the Chinese officials, it is unrealistic for foreign companies to simply sell management and technical know-how for a fee denominated in foreign exchange. In China, only firms which earn foreign exchange can seek approvals for foreign exchange allocations from the authorities. For most Chinese enterprises, the ability to pay in foreign exchange is nil as many are not export-oriented.

Besides the shortage of foreign exchange, many Chinese officials are suspicious of foreign consultants who may be seeking short-term gains with no long-term commitments.

Thus, foreign companies which aim to sell management and technical know-how to China must set up joint-ventures with the following conditions:

1. Joint-ventures are for periods of fifteen to thirty years only.
2. Joint-ventures would be in a better position to seek ways of exporting the Chinese products.
3. Joint-ventures would be in a better position to seek ways for counter-trade.
4. If joint-ventures were feasible for even only 10 per cent of the 400,000 enterprises, it would still be a big market for foreign companies which intend to upgrade Chinese enterprises (*Business Times*, 15 November 1985). So far Singapore seems to be the only ASEAN country seriously taking advantage of the Chinese market for factory upgrading.

Banking

China is short of the financial resources it needs to implement its development plans. The country's foreign exchange earnings have been adversely affected by the declining price of oil, its leading export. Yet China needs to buy capital goods, ranging from power stations to aircrafts, to implement her aim of quadrupling industrial and agricultural output between 1980 and the year 2000.

There are only three ways in which funds can be obtained to finance various economic programmes. One solution is to encourage foreign investment. However, progress in attracting foreign investment as an important source of funds has been slow. The second alternative is to approach the World Bank and other multilateral agencies for soft loans, but again the amount of financing available falls short of China's needs. The third alternative is to raise funds through loans from foreign banks. Indeed, some bankers anticipated that China's outstanding foreign debt is likely to jump to US$35-45 billion by 1990, compared with US$14.7 billion in 1986 (*Asian Wall Street Journal*, 14 November 1986). Some banking executives in Hong Kong have indicated that the Chinese have become more receptive towards the use of foreign loans.

However, China's standing as a borrower is impaired by the following:

1. The problems associated with lending to China are serious and not likely to disappear in the future. Bankers face endless haggling, low margins, unclear legal procedures, and difficulties with obtaining repayment guarantees.
2. China's borrowing ability is constrained by the falling foreign exchange reserves and widening trade deficit. Currently, 6.6 per cent of China's foreign exchange earnings goes to repay debt. Although this ratio is very low by world standards, China has said that it will not borrow to the point where repayments exceed 15 to 20 per cent of foreign exchange earnings. Given this self-imposed limit, outstanding debt in 1990 could be reduced to only US$35 billion.

Singapore with its financial centre is the only country in ASEAN that is capable of participating in China's loan financing.

Airport Development

China is determined to upgrade more than 100 airports throughout the country and has planned to spend about S$500 million to accelerate construction and expansion. Sixteen new airports have been planned. These are located in open coastal cities, important economic centres, tourist cities, as well as remote areas. China's air service has been subject to much criticism for its ageing aircrafts, tardiness on the ground, and its inability to maintain proper schedules. Apart from the construction of airports, China therefore also needs and wants modern management know-how to run its airports. Singapore again is the only ASEAN country able to meet China's needs for airport construction and management.

Port Development

China's ports have been too few and too small to deal with the surge in foreign trade in recent years. Consequently, ports are so clogged that Chinese export commodities are often delivered late. Port congestion not only reduces the competitiveness of China's exports, but also delays necessary imports, which in turn upset production schedules and the country's modernization programme. For instance, in 1985, China's ports handled 340 million tons of cargo, but ships had to wait over a month to be unloaded at major ports such as Shanghai and Dalian. The Ministry of Communications in China has announced that in the next few years more than RMB10 billion would be allocated to port development (*CTW Supplement*, 29 December 1986). A total of 200 berths, including 120 deep-water ones, will be constructed in the next few years. Thus, by 1990, China should have 1,200 berths, among which 320 will be deep-water ones.

As expected, China is keen to seek foreign funds for its massive port development programme because expenditure for this programme far exceeds the country's financial capability. About 33 per cent of the required foreign funds will come from the World Bank and the remaining portion will have to come from foreign investors.

In order to encourage joint-ventures in port development, China announced that the joint-venture co-operation period for port projects can exceed thirty years and may be extended (*CTW Supplement*, 29 December 1986). Despite such preferential terms, foreign investment in port development is still very small compared with that in hotel construction and industrial production. The fundamental reason is that joint-ventures in port investment do not earn foreign exchange but only renminbi. At present, only ships carrying foreign flags have to pay for berth fees in foreign exchange; other service charges such as cargo handling and storage, which form a major portion of the charges, must be paid in renminbi.

Singapore again is the main country in ASEAN that is involved in port development in China.

Export of Chinese Technology

China has set up a company called China Patent Agent (HK) Ltd. in Hong Kong to export Chinese technology. The Chinese Academy of Sciences (CAS) has called for co-operation with Hong Kong industrialists to use Chinese technology for developing high-technology products to penetrate the world market jointly. The CAS has 40,000 scientists and technicians and 122 research institutes.

Currently, China relies on Hong Kong for its excellent telecommunication facilities, managing and marketing expertise, and diversified trade channels to market its technologies. Hong Kong is apparently ahead of Singapore in this area, but Singapore may be expected to compete with Hong Kong in the near future (*South China Morning Post*, 9 April 1987).

Exhibitions

The number of international exhibitions in China is expected to increase sharply. Exhibitions which promote economic co-operation in trade and investment are an ideal forum for establishing closer contacts between Chinese and foreign business.

Currently, Hong Kong and Singapore are very much involved in the organization of exhibitions in China. They are likely to remain important organizers of exhibitions in China in the near future.

Tourism

Tourism is a big foreign exchange earner for China. The number of foreign tourists and businessmen visiting China went up by 26.7 per cent over the 1985-86 period to reach 22.7 million.

Two aspects of international tourism in China are of significance to ASEAN. Firstly, there are more people from ASEAN, in particular from Singapore and Thailand, visiting China than before. Secondly, ASEAN and China can jointly promote tourism in East and Southeast Asia. It has been suggested, for instance, that Singapore and China could jointly promote each other as tourist destinations.

Power Industry

China faces a serious shortage of electric power. It is estimated that 20 to 30 per cent of China's industrial capacity goes unutilized because of insufficient power supplies (*China Business Review*, July-August 1985).

In 1985, China announced that it would import 10,000 megawatts of thermal power plant capacity for coastal cities over the next two years. It is a potential market worth US$2 billion to foreign suppliers (*China Business Review*, July-August 1985).

ASEAN countries can work with Western or Japanese partners to jointly penetrate the Chinese power market.

2. Problems

Services trade between China and ASEAN can be expanded significantly if the following two problems can be resolved.

Political Differences

Mainly due to political differences, trade in services between Malaysia and China, and Indonesia and China have been very limited. On all accounts, Malaysia should have been in a very good position to offer its expertise in many fields to China, but this has not been the case. Malaysia and Indonesia are basically unhappy with China over the Chinese policy of giving moral support to the communist parties in these two ASEAN countries. The political differences which are complicated by the ethnic issue are not likely to disappear in the near future.

Economic Differences

Many foreign investors complain about the following aspects of joint-ventures in China.

(1) *Lack of understanding on the complexity of foreign investment.* Chinese officials are generally not aware that attracting foreign investment requires a whole range of infrastructure. There is a tendency to hasten foreign investment in China without taking into account the whole range of requirements, benefits, and consequences.

(2) *Inadequate supply of good quality local materials or components.* There is a tendency for joint-ventures not to import materials and intermediate products so as to save foreign exchange. However, foreign investors are frustrated with the inadequate supply of local materials and their unreliable quality.

(3) *Managing local employees.* The economic system in China does not encourage high work performance. Labour productivity tends to be low.

(4) *Low regard for know-how and technology.* China has an inherent bias in the socialist system not to regard services highly. As such there is no high regard for services such as management know-how.

(5) *Inaccessible or closed domestic market.* Due to the shortage of foreign exchange, China does not allow foreign investors to convert renminbi to foreign exchange unless the joint-ventures are export-oriented. Joint-ventures which do not export would have to resort to counter-trade practices in order to repatriate profits in foreign exchange. Counter-trade involves many parties and usually only one in about ten attempts is successful.

(6) *Limited joint-venture period.* This may be the most serious problem facing foreign investors in China. For joint-ventures in industrial production, the duration of the contracts is limited to a maximum of thirty years. For joint-ventures in port development, China allows the contract to go beyond this period. But basically, there is a limited period of time for joint-ventures in China. The limited period would undoubtedly affect foreign investors' calculations of rates of return in China. Towards the end of the contract, foreign investors may not be willing to re-invest in the plants and that eventually works against both the foreign investors and the Chinese partners. The limited joint-venture period also poses problems in securing bank loans as land equipment cannot be used as collateral.

(7) *Incompatibility of laws and accounting practices.* As has been discussed earlier, China is trying to remedy this incompatibility.

Despite the above-mentioned problems, trade in services between China and ASEAN will continue to grow. China is too big a market for ASEAN countries, especially Singapore, to ignore. On the other hand, China needs foreign technology and must constantly upgrade her infrastructure to attract joint-ventures.

By and large, China needs management personnel at all levels and in all fields, ranging from banking, computer, hotel, and air-travel to legal services to meet the targets of the country's ambitious modernization programme. Among the ASEAN countries, Singapore has been able to play the biggest role in the current economic development of China for the following reasons: first, the political climate for trade in services between China and Singapore has been very good; second, Singapore's economic experience is very relevant to China's needs; third, Singaporeans speak English and Mandarin, thereby enabling them to play an important role in bridging the gap between the Chinese and the Westerners.

NOTES

* As data on Brunei are not available, this paper only examines the services trade between the other five ASEAN countries and China.

1. State Statistical Bureau, People's Republic of China (PRC), *Statistical Yearbook of China, 1985.*
2. John Wong, "An Overview of ASEAN-China Economic Relations", in *ASEAN-China Economic Relations: Trends and Patterns*, edited by Chia Siow-Yue and Cheng Bifan (Singapore: Institute of Southeast Asian Studies [ISEAS], 1987), p. 12.
3. Statement by an executive of Manufacturers Hanover Trust Co. in Hong Kong.

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9
ASEAN-China Trade: Prospects for Counter-Trade

Juanjai Ajanant

I. Introduction

The last two decades have seen the relationship between the People's Republic of China (hereafter China) and ASEAN countries undergoing a dramatic evolution. The end of the Vietnam War, the U.S.-China *detente*, and the Vietnam invasion of Kampuchea are major events which moved many countries of ASEAN to normalize their relationship with Beijing.[1] The changes which took place within China itself have also led to closer co-operation between ASEAN and China.

Many argue that the death of Chairman Mao Tse-Tung and the purge of the Gang of Four escalated the new emerging trend in China and led to the rise of Deng Xiaoping to the supreme position in China. Under Deng, China which had been under the strict socialist path, began to reform her economic system based on the Four Modernization Principles. The modernization of China, which began in 1970, comprises new thinking on the economic system, institutions, and economic relationship with the rest of the world — the so-called "open-door policy".[2] These developments have caused some concern both within China and in the rest of the world. The introduction of the profit motive and the price system into China means that there can be incentives for Chinese to operate according to the market principle. At the same time, China has not solved the problems arising from the parallel operation of the price mechanism system and the planned economy. At present, the price mechanism is limited to certain commodities and localities and it is very difficult to envisage its extension to the whole vast economy.

The introduction of the market system, while generally lauded by outsiders, has also led to a price spiral resulting in a higher cost of living for the Chinese. The economic reforms which China undertook means also that she is more willing to integrate with the international economy. Since China has reached self-sufficiency in many commodities, her exports of surplus items have played a significant role in her economic relations with the rest of the world in general. Her exports of textiles and clothing, rice, and petroleum are also in competition with the exports of ASEAN.[3]

The integration of China into the world economy opens up many prospects and problems for ASEAN. Aside from the political and security issues, China is an economic power to be reckoned with. Consequently a strong economic relationship between ASEAN and China can help the two parties in the pursuit

of economic prosperity. This paper explores the possibility of a stronger trade relationship between ASEAN and China through the counter-trade channel. It draws on the counter-trade experience of ASEAN countries, mainly the practices by Thailand, Indonesia, the Philippines, and Singapore.

II. Trade Flows between China and ASEAN

China and ASEAN countries have a similar set of major trading partners, namely, Japan, the United States, and the EC. Of China's export trade with the rest of the world, a large proportion was conducted with the Pacific Rim countries, notably with Japan and the United States (Tables 9.1 and 9.2). The proportion of China's trade with the Pacific countries rose from 50 per cent in 1978 to 68 per cent in 1985.

Japan is the most important trading partner of China in terms of percentage share of China's trade. For example in 1985, China's exports to Japan represented 20 per cent of her total exports, while imports from Japan represented 32 per cent of her total imports. The United States has become China's second most important partner in trade accounting in 1985 for nearly 10 per cent of her imports. However, China's trade with the United States and Japan varies in bilateral trade balance. China has a trade deficit with Japan, a phenomenon shared by almost all of Japan's trading partners all over the world. China's bilateral trade balance with the United States however, showed a surplus in some years but trade is comparatively balanced, with the size of deficits and surpluses not more than 10 per cent of the total trade.

What are the patterns of trade between China and ASEAN countries? China's exports to ASEAN was a sizeable 10 per cent share in 1985 while her imports from ASEAN was a mere 2 per cent share of her imports. Tables 9.3 and 9.4 show China's exports to and imports from ASEAN countries in 1978–85. In 1978, China's exports to ASEAN were valued at US$845 million and her imports were US$292 million. By 1985, the export value had risen to US$3,121 million, and imports rose to US$887 million. Between 1978 and 1985, while China's exports grew on an average of 20.8 per cent per annum, ASEAN exports to China grew at 17.2 per cent. The ASEAN-China trade shows a persistent surplus for China. In fact, China's bilateral trade surplus has increased from US$500 million in 1978 to US$1.6 billion in 1985.

China trades with all the ASEAN countries. However, trading transactions take place mainly with Singapore, Thailand, and the Philippines. Both Indonesia and Malaysia, for political and security reasons, have approached their trade with China cautiously. Between 1978 and 1980, China exported to but did not import any goods from Indonesia. In 1981 China began to import from Indonesia, amounting to US$8 million worth of goods, and this import trade has grown robustly with a growth rate of 50 per cent annum in 1981–85. In 1978, China's exports to Malaysia were valued at US$211 million but have grown very sluggishly up to 1985. The growth of imports from Malaysia was more promising. In 1978, Malaysian exports to China were recorded at US$110 million and reached

TABLE 9.1
China's Exports to Asia and the Pacific Countries, 1978–85
(In million US$)

	1978	1979	1980	1981	1982	1983	1984	1985	Annual Growth Rate, 1978–85 (%)
ASEAN	845	1,080	1,635	1,745	1,758	1,567	2,289	3,121	20.5
Australia	140	166	244	340	319	230	313	292	11.1
Canada	83	143	132	183	165	200	258	296	19.9
Hong Kong	2,249	3,021	4,401	5,264	5,430	5,847	7,131	7,568	18.9
Japan	1,948	2,793	4,139	5,032	5,083	4,846	5,660	6,222	18.0
New Zealand	19	34	40	36	40	32	38	49	14.5
United States	324	594	1,056	1,875	2,275	2,252	3,074	3,840	42.4
Asia-Pacific Total	5,608	7,831	11,647	14,475	15,070	14,974	18,763	21,388	21.1
China Total	10,086	13,718	18,875	21,495	22,900	23,712	27,644	31,325	17.6
Asia-Pacific Share (%)	55.6	57.1	61.7	67.3	65.8	63.1	67.9	68.3	

SOURCES: U.S. Central Intelligence Agency, *China International Trade, Fourth Quarter, 1985*, July 1986; Joint Economic Committee, Congress of the United States, *China's Economy Looks Toward The Year 2000*, vol. 2 (May 1986).

TABLE 9.2
China's Imports from the Asia-Pacific Countries, 1978–85
(In million US$)

	1978	1979	1980	1981	1982	1983	1984	1985	Annual Growth Rate, 1978–85 (%)
ASEAN	292	480	694	539	775	526	659	887	17.2
Australia	484	776	796	639	838	393	736	865	8.6
Canada	442	507	742	776	1,005	1,295	968	929	11.2
Hong Kong	63	382	1,249	1,956	1,954	2,495	5,031	7,858	99.3
Japan	3,074	3,674	5,109	5,076	3,500	4,918	7,199	12,590	22.3
New Zealand	64	89	161	123	108	110	123	136	11.4
United States	865	1,724	3,755	3,603	2,912	2,173	3,004	3,856	23.8
Asia-Pacific Total	5,284	7,632	12,506	12,712	11,092	11,910	17,720	27,121	26.3
China Total	10,321	14,283	19,180	17,941	16,689	18,487	25,488	39,480	21.1
Asia-Pacific Share (%)	51.2	53.4	65.2	70.9	66.5	64.4	69.5	68.7	

SOURCES: Same as for Table 9.1.

TABLE 9.3
China's Trade with ASEAN Countries, 1978–85
(In million US$)

	1978	1979	1980	1981	1982	1983	1984	1985	Annual Growth Rate 1978–85 (%)
Imports from:									
ASEAN	292	480	694	539	775	526	659	887	17.2
Indonesia	0	0	0	8	14	27	8	41	50.5
Malaysia	110	182	217	88	110	157	165	161	5.6
Philippines	47	51	45	78	105	22	60	80	8.1
Singapore	58	170	308	179	240	213	243	333	28.4
Thailand	77	77	124	186	306	107	183	271	19.7
Exports from:									
ASEAN	845	1,080	1,635	1,745	1,758	1,567	2,289	3,121	20.5
Indonesia	116	125	189	242	220	194	214	233	10.5
Malaysia	211	212	241	261	264	257	272	239	1.8
Philippines	112	121	210	200	212	76	217	277	13.8
Singapore	326	392	599	736	839	788	1,283	2,160	31.0
Thailand	80	230	396	306	223	253	303	212	14.9

SOURCES: Same as for Table 9.1.

TABLE 9.4
China's Balance of Trade with ASEAN Countries, 1978–85
(In million US$)

	1978	1979	1980	1981	1982	1983	1984	1985
ASEAN	553	600	941	1,206	983	1,041	1,630	2,234
Indonesia	116	125	189	234	206	167	206	192
Malaysia	101	30	24	173	154	100	107	78
Philippines	65	70	165	122	107	54	157	197
Singapore	268	222	291	557	599	575	1,040	1,827
Thailand	3	153	272	120	−83	146	120	−59

SOURCES: Same as for Table 9.1.

US$200 million in 1980 but slid to US$88 million in the following year. Since 1983, China's imports from Malaysia have remained fairly constant at the US$160-million level.

Singapore, Thailand, and the Philippines accounted for a major share of the China-ASEAN trade. Prior to the normalization of relations between China and some ASEAN countries, Singapore was used as the entrepôt for trading transactions with the rest of ASEAN. Hong Kong also acted as an entrepôt (Table 9.5). Since then, Singapore's trade with China contracted with the establishment of direct trading between China and these countries. China-Singapore trade has grown steadily, with Chinese exports to Singapore rising from a mere US$322 million in 1978 to over US$2 billion by 1985. For Singapore, on the other hand, trading with China tends to be one-sided. Her exports to China remained in deficit for the entire period with a peak deficit of US$1,040 million in 1985. Singapore accounts for one-half to two-thirds of ASEAN-China trade.

The Thailand-China trade has grown quite steadily over the years. China's exports to Thailand grew at an average of 14.9 per cent per annum between 1978–85 while her imports of Thai products grew at an average of 19.7 per cent per annum

TABLE 9.5
China's Import and Export Trade through Hong Kong, 1981–85
(In million US$)

	1981	1982	1983	1984	1985
Imports from:					
China	58	91	136	269	394
Indonesia	37	42	34	n.a.	n.a.
Japan	296	273	466	1,213	1,867
Korea	163	56	45	160	355
Singapore	29	27	35	n.a.	n.a.
Taiwan	438	208	169	426	988
United States	114	170	203	375	575
Exports to:					
Indonesia	228	251	224	195	165
Japan	203	148	153	273	370
Korea	74	94	115	185	249
Taiwan	n.a.	90	96	127	116
Singapore	147	156	163	151	157
United States	503	589	758	1,123	1,445
Total					
Imports	1,438	1,316	1,675	3,590	5,907
Exports	2,295	2,420	2,706	3,595	4,441

NOTE: Converted into U.S. dollars by the annual average exchange rate of the HK dollar.

SOURCES: *Hong Kong External Trade*, 1982, 1984, and 1985.

in the same period. While China's exports to Thailand hovered between the US$200–300 million, her imports of Thai products grew from US$77 million in 1978 to US$306 million in 1982 and then declined to a lower level in the subsequent years. Thailand is the only ASEAN country which has ever recorded trade surplus with China. In 1982 and 1985, Thailand's bilateral trade surpluses were US$83 and US$59 million respectively.

The Philippine-China trade is quite active. In 1978 Chinese exports to the Philippines were valued at US$112 million and such exports grew during 1978–85 at the rate of 13.8 per cent per annum. There was a sharp decline in exports in 1983, reflecting political turbulence in the Philippines, but exports bounced back to the US$217 million in 1984 and US$277 million in 1985, surpassing Chinese exports to either Thailand or Malaysia.

Chinese imports from the Philippines show a low level, with annual values of less than US$100 million in 1978–85, except for 1982 when imports reached US$105 million.

In summary, ASEAN-China trade relations have been growing steadily with China exporting much more than she imports. Singapore, Thailand, and the Philippines are the three main countries in this trade relationship. Singapore-China trade is the largest portion of trade between ASEAN and China.

III. Trade Practices in ASEAN and China

Each nation has its own institutional and legal frameworks for conducting trade with other nations. Institutions can assist or hinder trade. The ASEAN countries conduct their international trade in accordance with the international rules of the game. Private enterprises, government agencies, and public enterprises can engage in trade with most nations around the world. In the private sector, trade practices are based on the price mechanism. Exports of goods are backed by Letters of Credit, D/Ps and D/As, and contracts agreed between parties. The regulatory agencies range from the Ministries of Trade and Industry, Ministry of Agriculture, and other ministries. The laws governing exports and imports vary among ASEAN countries, with different lists of import and export bans, export and import licenses, and other trade controls.

None the less, there exists a wide array of products and commodities which ASEAN traders can transact with their counterparts world-wide. While some ASEAN countries are more strict in their exports and imports for various political and economic reasons, trade is generally free from the intervention of the authorities except for selected commodities which are restricted by national policies. Thus, Bulog of Indonesia remains the sole importer of rice for the Indonesian Government. Pertamina in Indonesia and Petronas in Malaysia dominate their countries' petroleum exports. For Thailand, the Petroleum Authority of Thailand controls over 90 per cent of Thailand's petroleum imports.

For China, foreign trade is much more controlled by the state. Before 1978, national foreign trade corporations (NFTCs) and their branches under the

jurisdiction of the Ministry of Foreign Trade (MFT) were the only institutions in China conducting import and export business. The economic reforms which took place in 1978 resulted in new institutional arrangements in trade. In 1982, several agencies, including the Ministry of Foreign Trade, were merged into a new ministry — the Ministry of Foreign Economic Relations and Trade (MOFERT). However, this ministry is just one of the many new institutions which deal with export and import.

Currently, there are eight organizations which deal with foreign trade.[4] They are:

1. Ministry of Foreign Economic Relations and Trade (MOFERT);
2. National foreign trade corporations and their local branches;
3. Import and export corporations under industrial ministries and other institutions;
4. Foreign trade bureaus under MOFERT in provinces, municipalities, and autonomous regions;
5. Local foreign trade corporations;
6. Commercial organizations abroad;
7. Agencies and trading offices in Hong Kong and Macao; and
8. China Council for Promotion of International Trade (CCPIT).

Apart from these eight entities, Guangdong Province also has powers to conduct foreign trade, a power not accorded other provinces in China.

The complexities of a multiple institutional arrangement serve to show that China's trade practices can be cumbersome to foreigners. The operations and procedures of China trade are conducted both under and outside trade agreements.

The majority of China's trade agreements take the form of bilateral trade agreements, except for the Sino-EC agreement. China has signed bilateral trade agreements with over ninety countries, under which trade is normally negotiated once every year and MOFERT is responsible for the signing of the agreement. Once the protocol is completed, actual business can take place and be carried out by various agencies depending on the scope of each entity.

In addition to the above arrangement, China can sign non-governmental trade agreements with the private sector of those countries which have no formal ties with China. The Liao-Cheng Chih-Takasaki Memorandum signed between China and a group of Japanese business enterprises exemplifies this type of non-governmental trade agreements.

The third type of arrangement is non-agreement trade, which accounts for the greater part of China's trade with other nations. The salient feature of this type of trade is that business is based on negotiations between trading parties with side contracts specifying terms and conditions of sale or purchase. Various Chinese trading companies can engage in this type of trade with private entities of other countries.

The trading transactions which take place between China and ASEAN fall under the bilateral governmental trade agreements. Some agreements cover only product items and volumes, others cover volumes and/or values for individual

items. There can also be a non-binding agreement between China and ASEAN countries. Over the years, China-ASEAN trade agreements have developed from the non-binding type to a combination of itemized volume or values. One hypothesis which can be advanced is that the non-binding agreement serves as a diplomatic stepping stone. As each side becomes familiar with the other's trading practices and closer economic ties emerge, trade agreements progress into more specific terms.

IV. Counter-Trade Practices in ASEAN

Bearing in mind that ASEAN trade practices follow international rules, while the Chinese have trade agreements in accordance with their planned economy, the ASEAN-China trade agreements provide the frameworks whereby trade takes place between China and ASEAN countries. Although side agreements may be stipulated, the general impression is that there is flexibility in most items and rigid protocol is followed in only a few items. The trade agreements may differ in their terms and conditions but are akin to counter-trade practices prevailing in many countries around the world.

The term "counter-trade" can convey different meanings and implications. To GATT, the proliferation of counter-trade is contrary to the general principle of multilateral trade. Both GATT and UNCTAD do not wish to see more transactions taking place outside the multilateral arrangement. This is understandable since counter-trade undermines the sacred shrine of both organizations.[5] While there are valid reasons to discredit counter-trade, since it is discriminatory and distortive, the practice of counter-trade between China and ASEAN can be an important vehicle for more balanced trade between both parties. It is this idea of balanced trade between importing and exporting countries which led many countries plagued by trade deficits and foreign exchange shortages to conduct trade under counter-trade terms. Notable examples can easily be drawn from countries in Eastern Europe (COMECON), Latin America, and Africa.

To many people, counter-trade connotes an archaic barter trade described succinctly by David Ricardo's wine and cloth exchange between England and Portugal in the eighteenth century. In practice, counter-trade has several forms.[6]

(1) *Barter.* This is the most simplified and perhaps the best known form of counter-trade. The transaction involves physical exchange of goods without price, though quantity and quality can be specified. Most barters are void of terms of payments but rule out the re-export possibility to the third country. They also stipulate the duration under which goods must be exchanged. An example of barter trade is when Brazil exchanged 50,000 tons of soybeans for 50,000 tons of Mexican matpe in 1982.

(2) *Compensation.* Under compensation trade, the private sector in one country can agree to sell goods to the government of another country, promising to

purchase the equivalent worth of products of that country. The purchasing country may settle the payment wholly in cash or with part cash and part commodities. The COMECON countries are currently practising this type of counter-trade because it offers them an opportunity to plan their local production and expedite the payments.

(3) *Counter-Purchase.* Counter-purchase consists of two contracts simultaneously signed by two parties. The first contract covers the sale of goods and services while the second one covers the purchase of goods and services. The values of purchase and sale may not be equivalent but there is usually a specified period under which both sale and purchase must take place. The sale of DC-9 aircrafts by McDonnell Douglas Corporation to the government of Yugoslavia was made with an agreement to purchase canned ham and equipment along with job offers to Yugoslavs in an airline business.

(4) *Buy-Back.* The buy-back system can be beneficial for activities which require high tech and/or joint-ventures. Both parties must agree to the purchase of machinery and the sale can only be final when the foreign partner buys back either a part or total output of that collaborative effort. For example, International Harvester sold a tractor plant to Poland and in return it has to purchase all outputs of the tractor factory.

(5) *Swap.* The swap arrangement is in general used for minimizing costs of transportation between countries. The routine is as follows: A swaps goods with B and A agrees to ship goods to C while B agrees to ship goods to D. In 1983, the Soviet Union agreed to a swap contract with Venezuela. Venezuela had to ship a specified volume of crude oil to Cuba while the Soviet Union would ship the same volume of crude oil to West Germany. This arrangement apparently minimizes the transportation cost.

(6) *Triangular Trade.* This variety of counter-trade involves a third party in the transactions. Suppose Company A wishes to exchange goods with Company B. Company B can purchase goods from Company C and delivers them to Company A in return for required goods and services. This method of trade was quite popular during World War II. Today many companies have either set up a division to conduct business through this method or become specialists in the counter-trade. The 3M Company has conducted business via this route and Philip Brothers is a world-wide firm specializing in triangular trade. In fact, many Japanese trading companies are prepared to expedite the exchange between two nations using this method.

Among ASEAN countries, some forms of counter-trade practices are known to exist between each ASEAN country and the rest of the world. Indonesia officially introduced its counter-trade policy in 1982. In 1983 the value of Indonesian exports under counter-trade was about US$300 million. Japanese trading companies were against the Indonesian policy but finally Mitsubishi Company undertook a counter-purchase for Indonesian fertilizers. Since August 1982, the Japanese have agreed to purchase US$700-800 million worth of goods in exchange for a US$1-billion oil refinery project.

The Malaysian Government also adopted the counter-trade policy in 1982 when its trade deficit grew to US$400 million. Prime Minister Mahathir gave his approval on counter-trade and ever since September 1982, it has been on every Malaysian trade mission's agenda. However, Malaysia has conducted counter-trade with Pakistan, Burma, and Bangladesh. Under normal circumstances, counter-trade is used to enhance a country's exports but the Malaysian counter-trade with these three nations appears to encourage imports rather than exports.

Singapore has extensive trading relations with numerous countries in ASEAN and the world. Some variation of counter-purchase has existed in the traditional entrepôt trade. To take advantage of international trends in counter-trade, Singapore has begun to actively promote the establishment of firms specializing in counter-trade.[7] In 1986, pioneer tax holidays were granted to six trading companies, including Cargill Trading of the United States and Australia's Centrobank, to establish subsidiaries engaging in counter-trade in Singapore. Four additional firms may be granted the same status.[8] It is to be noted that Singapore wants to be a counter-trade centre rather than use counter-trade in exporting its own domestic manufactures.

For Thailand, the pros and cons of counter-trade have been debated. The government under Prime Minister Prem has set up Committees and Sub-Committees on Counter-Trade and a draft bill was prepared in 1986 to promote counter-trade. The Counter-Trade Bill was dropped in 1986 but the practice of counter-trade continues. In 1981, the value of Thai trade under counter-trade amounted to B1,050 million. The following year saw a counter-purchase between Thailand and Indonesia involving aircrafts and refined sugar. Also in 1982, tapioca products were exchanged for fertilizers between Thailand and South Korea. In fact the counter-purchase of agricultural surplus commodities (that is, tapioca, rice, maize, coffee, and so on) dominate the Thai counter-trade with various countries, including the Philippines, Romania, Israel, and Brazil. Currently there are ten cases of counter-trade exchanges which are under review or ongoing. One of these is the exchange of Thai rice for an unspecified Chinese product.

V. The Thai Experience in Counter-Purchase

While Thailand might have been the newcomer to counter-trade practices, she has already, in this author's opinion, accumulated a vast experience in this trade. In many cases, counter-trade was adopted because the normal trading environment was not conducive to normal trade transactions. There were two constraints which led to the adoption of counter-trade by Thailand. The first was the surplus stock of commodities which necessitated that Thailand relieve domestic price and political pressure via counter-trade. In fact, the first regulation on counter-trade was entitled "Regulation on the Counter-Trade of Agricultural Products" and its committee was administered by the Ministry of Agriculture and Co-operatives. The second committee was the national body with the Bank of Thailand acting

as secretariat which continued to tackle the problem of surplus agricultural outputs, using these surpluses as an offer to foreign buyers. Both committees have since been replaced by the Sub-Committee on Counter-Trade chaired by the Minister of Commerce. This sub-committee reports directly to the Council of Economic Ministers.[9]

Second, while Thailand allows for counter-purchase between private enterprises in Thailand and their overseas counterparts, some institutional and legal limitations require a counter-trade. The case in point is the exchange of tapioca products for Korean chemical fertilizers. As Thailand remains a net importer of chemical fertilizers, both private importers and the Marketing Organization for Farmers (MOFF), a public enterprise under the Ministry of Agriculture and Co-operatives, can import chemical fertilizers. To maintain low retail prices for farmers the MOFF has to exchange tapioca for chemical fertilizers. The MOFF's liquidity problem may have necessitated that it conduct the exchange under this system.

By 1986, the Thai Government instituted these guidelines: (a) counter-trade supplements other trading arrangements; and (b) counter-trade should be initiated by Thailand.[10] The first guideline recognizes the general belief that counter-trade is not efficient and may be costly. Thus it may be considered only as a supplementary channel for trade flows. The second guideline is to establish that Thai interest in counter-trade must take priority. In recent years, at the insistence of foreign buyers of Thai products, the Thai Cabinet has, at times, decided to proceed with the counter-trade even when it was not clearly in Thailand's interest.

Most Thai counter-trade practices fall into three forms: barter, compensation, and counter-purchase. Other forms of counter-trade are not prevalent. (Appendix Tables A9.1 and A9.2). Two Thai cases illustrate counter-trade deals. Both cases involve an exchange of Thai agricultural products for manufactured goods. In 1985, Thailand's Metro Machinery and Kitti Rice Company signed a contract with Interbras (a subsidiary of Petrobas). The contract required Brazil to purchase Thai rice to be shipped to Rio de Janeiro and Thailand to purchase Caterpillar tractors of the same value. By January 1986, the rice shipment worth B468 million was completed by Kitti Rice Company, but the Thai Government had not bought Brazilian tractors. By March 1986, the Thai mission agreed to buy tractors and generators from Brazil. In all, Thailand purchased tractors worth B88.4 million. The inclusion of generators into the deal had prompted the Association of Thai Industries to protest; it feared that locally-made generators were not given an equal opportunity.

After some nineteen months, this rice-tractor counter-trade still has not been completed. There have been enormous costs involved. Both sides have travelled many times to the other country to negotiate contracts. Both parties have had to put up the case for their purchase and sale with their own governments and with the counterpart's government. Based on the time and expenses incurred in this trade, the counter-trade has entailed high transaction costs which cannot be recouped.

In contrast, the Yugoslav-Thai agreement which was initiated in 1986 represents an ongoing trade involving Thai export of rice, garments, and tapioca products in return for cranes. The value of counter-purchase was set at B360 million. The Thai Cabinet has finally approved the deal, the most troublesome part of which was the form of payment. In the end, it was agreed that the Port of Bangkok would deposit three instalments of B120 million each into the state-owned bank. Yugoslavia would purchase the items based on market prices and the value of products could be debited from the bank account.[11]

VI. Prospects for ASEAN-China Trade Expansion

While most ASEAN countries have adopted and conducted counter-trade with many countries in and outside the COMECON bloc, there has been little effort by both ASEAN and China to pursue counter-trade. If we accept the proposition that trade in any form is superior to no trade, then ASEAN-China counter-trade should be encouraged.

At present all ASEAN countries conduct their trade under the open international system as well as under bilateral trade agreements. On the other hand, China's trade is conducted mainly through bilateral trade agreements. It is unlikely that China's trade system will be transformed to meet the practices of the international trading system. Hence, ASEAN-China trade will be conducted mainly under the counter-trade format.

The counter-trade practice, though not encouraged by various entities because of its lack of transparency and distortive nature, should be adopted to expand the trade flows between China and ASEAN. Since some ASEAN countries are very cautious in conducting trade with China for domestic political and security reasons, the counter-trade format would allow ample opportunities for both parties to accept or decline the offers. Items which are not in the interest of either China or ASEAN countries can be rejected without fear of negative consequence.

It was shown earlier that ASEAN-China trade has been growing but the growth of trade has been in China's favour; that is China enjoys a trade surplus with all ASEAN countries with the possible exception of Thailand. ASEAN countries can only redress the imbalance by urging the Chinese counterpart to purchase more ASEAN products. Counter-trade can be a convenient tool to pursue this goal.

In view of the present difficult world trading environment, the trading practices of ASEAN must be flexible and encompass a variety of formats. It has been recognized that counter-trade can be costly in terms of expenses and time involved. There are, of course, ways whereby inconveniences can be reduced, using either the compensation or the counter-purchase scheme. The compensation counter-trade is based on the equivalent values of purchase and sale. Items can be specified in terms of volumes and/or values. This can be written into the protocol and/or side agreements. Under the counter-purchase principle, the

overall sale and purchase do not match and this allows further room to select only goods on which both parties agree. Again the protocol may be specific as regards details of prices and quantities. Once the transaction costs are minimized, the counter-trade practices between ASEAN and China can lead to growth of bilateral trade to mutual benefit.

APPENDIX TABLE A9.1
Summary of Thailand's Counter-Trade Practices, 1981–85

Initiator	Purchase	Sale	Values or Volume	Agency	Remarks
1981					
UMC International (Soviet Union)	Chemical fertilizers (16-20-0) 103.736 tons (B4,820 /ton)	Maize 200,000 tons (B2,500/ton)	B500 million	MOFF	
Romania	Chemical fertilizers (16-20-0, or 20-20-0) 123,834 tons (B4,820 /ton)	Maize 200,000 tons (B2,748 /ton)	B550 million	MOFF	MOFF could only deliver 25% of the agreed amounts and Romania could only deliver 30,988 tons of fertilizers.
1982					
Indonesia	Aircrafts (CASA)	White sugar	Equivalent values	MOAC	
Haitai International (S. Korea)	Chemical fertilizers 50,000 tons	Tapioca 88,000 tons	—	MOFF	
1983					
Haitai International (S. Korea)	Chemical fertilizers 60,000 tons	Tapioca 100,000 tons	—	MOFF	
1984					
Haitai International (S. Korea)	Chemical fertilizers 60,000 tons	Tapioca 100,000 tons	—	MOFF	

APPENDIX TABLE A9.1 (*Continued*)

Initiator	Purchase	Sale	Values or Volume	Agency	Remarks
1988					
Haitai International (S. Korea)	Chemical fertilizers 16-20-0 for 100,000 tons; 15-15-15 for 100,000 tons	Tapioca 100,000 tons; Tapioca pellets 85,000 tons	–	MOFF	
Philippines	Chemical fertilizers 40,000-50,000 tons	Tapioca 20,000 tons; 35% broken rice; 50,000 tons	–	UMC International	Counter-Purchase
Romania	Farm machinery; chemical fertilizers; chemicals	Maize, sugar, tapioca pellets, coffee beans	US$750 million	UMC International	Duration: 5 years each at US$150 million
Philippines (via C.P.)	Chemical fertilizers	A-1 Rice (30,000 tons)	–	Thepphanich Co.	
Israel	Wine (carmel wine)	Gas cylinders	–	Gas Cylinder Inudstry Co.	

MOFF = Marketing Organization for Farmers.
MOAC = Ministry of Agriculture and Co-operatives.
UMC = United Metro Company.
C.P. = Charoen Phokphan Company.

SOURCE: National Economic and Social Development Board of Thailand.

APPENDIX TABLE A9.2
Summary of Thailand's Counter-Trade Practices, 1986–87

Initiator	Purchase	Sale	Values or Volume	Agency	Remarks
Mercandia Co. Denmark	Vessels (3,500-14,000 tons)	N.S.	B60-170 million	MOC	MOC allows private parties to proceed.
Strongwell (Brazil)	Radar equipment	Rice/maize Coffee/Tapioca	N.S.	MOC	MOT is considering the offer.
China PRC	N.S.	Rice, 50,000 tons	N.S.	MOC	Thailand declined the offer.
Polish Motor Industry Corp (Poland)	Bus chassis	Variety of rice	US$5 million	MOT	MOT must deliberate its decision.
ACMAT (France)	Locally-made vehicles	Rice 60,000 tons between Jan. 1987 – Dec. 1988	N.S.	MOD	Direct negotiation between ACMAT & MOD.
South Korea	Chemical fertilizers 100,000 tons in 1987	Tapioca, 100,000 tons plus other products	N.S.	MOC	MOAC is considering the offer.
South Korea	Military equipment	Maize, tapioca, rubber, and sugar	N.S.	MOC	MOD is deliberating its decision.
Cargill (for Indonesia)	Crude oil	N.S.	N.S.	MOC	PTT is handling this negotiation.
Ore and Metal Trade Co. (India)	Buses and trucks	Tin flour spar	N.S.	MOC	MOT and its state enterprises are considering this offer.

APPENDIX TABLE A9.2 (*Continued*)

Initiator	Purchase	Sale	Values or Volume	Agency	Remarks
Metro Machinery (Brazil)	Tractors/Generators	Rice	B80 million	MOC	Brazil bought B468 million worth of Thai rice. Thailand has so far purchased B88.4 million of Brazilian products. This case continues.
Hungary	Medical equipment	Rubber, rice, garments	N.S.	MOP	The Cabinet approves the deal in March 1987.
Oriente (Yugoslavia)	Cranes	Rice, garments, tapioca	B360 million	Port Authority, MOT, MOC	The deal went through in May 1987.

N.S. = Non-specified.
MOC = Ministry of Commerce.
MOT = Ministry of Transport.
MOD = Ministry of Defence.
MOP = Ministry of Public Health.
MOFF = Marketing Organization for Farmers.

SOURCE: As in Appendix Table A9.1.

APPENDIX A9.3

PROTOCOL OF THE IMPORTATION AND EXPORTATION OF COMMODITIES BETWEEN THE GOVERNMENT OF THE KINGDOM OF THAILAND AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA FOR THE YEAR 1987

The Government of the Kingdom of Thailand and the Government of the People's Republic of China, desirous of developing and expanding trade relations between the two countries on the basis of equality and mutual benefit, have, through friendly consultations, reached the following agreement on the import and export trade schedules of the two countries for the year 1987:

1. The two sides agree to establish trade target value to US$400–500 million for 1987.

2. The Chinese side is prepared to import from Thailand in 1987 the following commodities:

Rice	100,000–120,000	tons
Maize	150,000–200,000	tons
Raw Sugar	100,000–200,000	tons
Rubber	30,00–50,000	tons
Synthetic Fibre	5,000–10,000	tons
Cashew Nuts	2,000–4,000	tons
Medicinal Herbs	US$2,000,000–3,000,000	
Building Materials	US$5,000,000	
Tobacco Leaves	2,000–2,500	tons
Chemical Materials	US$2,500,000	
Garment Accessories & Materials	US$500,000	

Certain quantities of coconut oil, gem stones, fruits, fish meal, leather and secondhand tires.

The importation of specific items will be decided according to the needs of China and Thailand's capability to supply.

3. The Thai side is prepared to import from China in 1987 the following commodities:

High-speed Diesel	300,000	tons
Coal	100,000	tons
Cotton	20,000	tons
Raw Silk	US$10,000,000	
Machinery & Equipment	US$20,000,000–30,000,000	
Chemical Materials	US$10,000,000–20,000,000	
Pharmaceutical	US$10,000,000	
Paraffin	5,000	tons

Certain quantities of farm tools and equipment, liquor and wine, and hardwares.

The importation of specific items will be decided according to the needs of Thailand and China's capability to supply.

4. The quantities above-mentioned will be contingent upon the results of further discussions that may be held between trade organizations or import and export traders

to the two countries on price and other transaction terms of the above-mentioned commodities.

5. The two sides agree that the proposed transactions as referred to above shall not preclude other commercial transactions between trade organisations or import and export traders of the two countries.

6. The two sides further agree to promote commercial transactions in other products between trade organisations or import and export traders of the two countries so as to realise trade target value of US$400–500 million established for 1987. To this end, both value of US$400–500 million established for 1987. To this end, both sides agree to inform each other from time to time of additional commodities of respective export interests.

Done in Beijing on 19 December 1986, in two original copies, each in the English and Chinese languages, both texts being equally authentic.

NOTES

1. See Sukhumband Paribatra, *From Enmity to Alignment* (Bangkok: Institute of Strategic and International Studies (ISIS), Chulalongkorn University, 1987), Chapter 3.
2. Masahiko Ebashi and Masaharu Hishida, "China's Open Door Policy and Its Implication for Asia-Pacific Countries towards the Year 2000", mimeographed (Asia-Pacific Development Centre, 1986).
3. Wa Jiahung and Cai Tianchung, "China's Foreign Trade Over the Past Thirty-Five Years", in UNCTAD, *Trade and Development* (Geneva, 1985).
4. United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), *Guidebook on Trading with the People's Republic of China* (Bangkok, 1982), pp. 61–75.
5. "While there is no official position within the GATT, the general feeling is that it is not a good thing and should be avoided whenever possible. It is argued that barter trade restrict the area of multilateral trade" (*Far Eastern Economic Review*, 27 July 1983).
6. Gary Banks, "The Economics and Politics of Counter Trade", *World Economy*, no. 2 (1983), pp. 159–82.
7. Koh Ai Tee, "The Role of the Public Sector in Singapore Towards ASEAN Economic Co-operation", mimeographed (Manila, 1987), pp. 13–15.
8. William J. Reiber, "Aspects of Counter-Trade", monograph, Department of Economics and Statistics, National University of Singapore, 1987.
9. The Thai experience was drawn from the author's personal experience involving the Ministry of Commerce - Interbras deal in 1986.
10. It represents an unwritten guideline which every committee adheres to though some members refuse to recognize it as a policy.
11. From a personal interview with the Deputy Director-General of Department of Foreign Trade, Ministry of Commerce in Thailand, in May 1987.

10
Counter-Trade in the Framework of China-ASEAN Trade

Pang Rongqian, Fu Zhengluo, and Ma Yuanhe

Over the past decade or more, trade between China and ASEAN countries has grown considerably. But there do exist some difficulties and problems. In the last few years, China's trade with some ASEAN countries has come to a standstill or even declined. This is indeed a very worrisome situation. How can the expansion of trade between China and ASEAN countries be promoted? Can counter-trade, a subject of much discussion, play a positive role in expanding China's bilateral trade with ASEAN countries? These are the questions dealt with in the present paper.

I. Developments and Problems in China-ASEAN Trade

1. Developments over the Past Decade

In the early years of the People's Republic of China (PRC), political considerations prevented the country and most ASEAN countries from entering into any trade relationship with one another. In the sixties, of all ASEAN members, only Singapore and Indonesia had direct trade relations with China, while the rest were trading indirectly through either Hong Kong or Singapore. Since 1967, direct trade between Indonesia and China had been suspended.

In the seventies, Malaysia, the Philippines, and Thailand resumed trade exchanges with China even prior to the restoration of diplomatic relations. Singapore had no diplomatic ties with China, but none the less maintained good trade relations. In 1978, the two governments signed a trade agreement and subsequently set up commercial offices in each other's capital. Indonesia reached an understanding on non-governmental trade with China in November 1985.

Over the past decade, China's trade with ASEAN countries has increased very rapidly. According to statistics from China's General Administration of Customs, the volume of trade between China and the six ASEAN countries increased from US$524 million in 1975 to US$3.964 billion in 1985, a near seven-fold increase

in ten years. Of this, China's exports to ASEAN countries increased from US$402 million to US$2.829 billion, and imports from ASEAN rose from US$162 million to US$1.135 billion.

In 1986, however, China-ASEAN trade was reduced to US$3.358 billion, a fall of 15.3 per cent over 1985. China's exports in particular dropped sharply from US$2.829 to US$1.878 billion, caused mainly by plummeting international oil prices. On the other hand, China's imports from ASEAN countries continued to increase, reaching US$1.48 billion in 1986, an increase of 30.4 per cent over the previous year.

Over the past ten years, the variety of commodities traded between China and ASEAN countries has also increased, particularly Chinese imports. Before 1975, Chinese imports from ASEAN countries consisted mainly of rubber, timber, cereals, sugar, coconuts, traditional medicines, and other traditional items. Since 1975, however, Chinese imports from ASEAN have also included industrial products such as steel products, offshore drilling platforms, kinescopes, refrigerators, automobile parts, chemical fibres, plastic materials, veneer boards, cement, and pesticides.

During the same period, trade imbalances between China and ASEAN were remedied to some extent. China has enjoyed a trade surplus with ASEAN countries for many years. More recently, China responded positively to the ASEAN call to redress the imbalance by examining the possibility of increasing imports of items which China has a need for and which its ASEAN partners are able to supply. The Sino-Filipino and Sino-Thai Joint Trade Committees have played a positive role in promoting steady and balanced bilateral trade development. In fact, the growth rate of China's imports from ASEAN countries was higher than that of exports in the period from 1975 to 1985, with an average annual growth of 25.1 per cent in the imports and 21.5 per cent in exports. At present, China maintains a relatively large trade surplus over Singapore and the Philippines, but has more or less balanced trade with Malaysia, Thailand, and Indonesia. In 1985, China even experienced trade deficits with these three countries. In 1986, China had deficits with Indonesia and Thailand while maintaining a marginal surplus with Malaysia.

In the last decade, direct trade between China and ASEAN developed rather rapidly. However, certain commodities are exchanged via third parties like Hong Kong, an arrangement that played a positive role in the fifties and sixties when direct trade channels were blocked. Thus, transit trade reflects the heritage of the past. We deem it reasonable and mutually beneficial that there should be less transit trade and more direct trade, as called for by ASEAN countries. China also favours direct trade and has embodied this preference in both its policies and measures. In fact, direct trade between China and ASEAN has already occupied a central place in recent years. In 1985, for instance, China's direct exports to Singapore and the Philippines were valued at US$2.08 billion and US$316 million respectively, while, according to Hong Kong official statistics, its transit trade with them was US$157 and US$57 million respectively, accounting only for 7.5 and 18 per cent of its direct trade with these two countries. Direct

trade is also the principal form of transaction with Thailand and Malaysia. There still exist some barriers to direct trade between China and Indonesia, so transit trade remains dominant.

2. Trade Problems

Trade between China and ASEAN countries is rather insignificant in volume, usually accounting for only about 5 per cent of China's total trade, and for barely over 2 per cent of ASEAN's aggregate trade volume. What is noteworthy is that the rapid growth of China-ASEAN trade is largely a result of the impressive growth in China-Singapore trade. In 1986, China's total trade with Singapore was US$1.768 billion, accounting for 52.6 per cent of its aggregate trade with ASEAN. China's trade with ASEAN countries, except Singapore and Indonesia, has stagnated since 1980. Even China's trade growth with Singapore is mainly attributable to its increased oil exports. Singapore is one of the major oil refinery centres in the world, with a daily capacity of 1 million barrels. In recent years, Singapore has accelerated its import of crude oil and oil products from China. Apart from oil, other Chinese exports to Singapore have stagnated. Thus, although China's trade with ASEAN has increased by 6.5 times over the past decade, trade with the majority of ASEAN countries has either stagnated or even decreased.

One of the key problems in Sino-ASEAN trade relations is the lack of complementarity in trade structures. For many years, China's exports to ASEAN comprised oil and oil products, coal, foodstuffs, textiles, Chinese traditional medicine, raw materials for the chemical industry, and agricultural machinery, with oil and oil products being the largest items. Its imports from ASEAN were largely primary products like rubber, timber, cereals, sugar, coconut products, and copper. Although manufactured goods such as steel products, chemical fibre materials, and veneer boards have been added to the list, primary commodities remain predominant in Chinese imports from ASEAN. But the overall imports of both China and ASEAN are largely composed of machinery, raw materials, and semifinished products, that is manufactured goods in the main. Such trade structures cannot but constrain the expansion of bilateral trade. Both China and ASEAN countries wish to increase their exports of manufactured products to one another, for this is the only way to enlarge the scope of commodity exchanges. To this end, both China and ASEAN countries should continuously upgrade their economic and technological levels, optimize the structures of their exports, and improve the quality, designs, packaging, and services of their products so as to enhance their competitiveness and adaptability to the needs of each other's markets. It may take much time and painstaking efforts to achieve this, but it is an absolute necessity to do so.

Of course, the issue of trade imbalances must be further addressed so as to ensure steady and sustained development of trade between China and ASEAN. It is also necessary for both sides to make greater efforts to minimize transit trade in favour of direct trade.

3. Possibilities for Expanded Bilateral Trade

Further development of Sino-ASEAN trade relations is not only desired by both sides but it is also possible. In recent years, China and ASEAN countries have been accelerating their industrialization and modernization programmes and have experienced vigorous economic development. China's open-door policy has led to enormous trade opportunities for all countries in the world, including ASEAN countries, whose geographical proximity should undoubtedly give them a better chance to benefit from this policy. China's industrial development will increase the country's demands for rubber, timber, copper, vegetable oil, and building materials. Improvement of Chinese living standards and changes in their life-styles will create a larger market for consumer goods and ASEAN countries can certainly take advantage of this. Although these countries suffered a few economic setbacks in the last one or two years, their economies are full of vitality and augur well for further growth. China for its part will also benefit from expanded ASEAN economies and their greater import capabilities.

Needless to say, it is no easy task to expand trade on a significant scale. It will take much painstaking efforts, as well as practical and effective measures.

First, it will require that both sides, on the basis of greater production capacities and higher levels of technology, gradually optimize their trade structures and increase the share of manufactured goods in their exports, thus reducing their dependence on primary products. In the short term, this means focusing on the development of new commodities, particularly manufactured goods for export, while consolidating and upgrading existing commodities. The pace of products regeneration should be accelerated so as to improve their quality and competitiveness.

Second, trade has to be combined with various forms of economic co-operation. At present, in addition to trade, economic exchanges between China and ASEAN countries also take the forms of mutual investment, technical co-operation, and services contracting. In recent years, bilateral investment activities have been numerous, including not only investment projects in the services sector such as tourism projects, warehouses, shipping facilities, and hotels, but also in the production sector such as electronics, apparel, furniture, foodstuffs, animal feed, motorcycles, and building materials. In the future, trade and economic co-operation in its various forms should go hand in hand. For instance, one party may set up a factory in another's territory and ship the products back for domestic consumption. Governments may negotiate agreements, allowing exemption of customs duty for imports of such commodities.

Third, China and ASEAN need more exchanges to understand each other better. Owing to differences in their socio-economic systems and the fact that some ASEAN countries resumed their trade relations with China only in recent years, better mutual understanding is needed, not only between government agencies but between trading communities and non-governmental organizations as well. In addition, both sides should try to keep abreast of the latest developments in each other's societies. Understanding is the basis and pre-con-

dition for co-operation. Governments should further facilitate personnel exchanges, particularly those between business communities and scholars.

II. Role of Counter-Trade in Trade Expansion

Apart from the aforementioned measures to expand Sino-ASEAN trade, maximum use should be made of other more flexible forms of trade, among which counter-trade stands out as one of the most prevalent practices in international trade.

Counter-trade is a general term which covers a wide range of trading arrangements that combine export with the obligation to import. Under these arrangements, an exporter must undertake either to buy products from the importer or to sell products or services on its behalf; or else the two sides undertake to substitute each other's payments with goods. These arrangements include single barter, trade by account, compensation, counter-purchase, resale, and many other forms. Some of these forms were used right after the end of the Second World War, mainly between the Soviet Union and East European countries, including trade by account between the Eastern and Western countries. Since the advent of the eighties, counter-trade has developed rapidly into many other forms as required by the new international economic context. According to an investigation report by GATT in 1984, counter-trade now accounts for 8 per cent of the total volume of world trade. Some experts believe that the figure could be much higher, at 30 per cent. A survey by the American Council of Foreign Trade shows that the number of countries engaged in counter-trade has increased from 15 in 1972 to 27 in 1979, and again from 88 in 1983 to over 100 at present. Among them, 14 states have promulgated comprehensive legal regulations governing counter-trade, and 77 have consolidated counter-trade regulations into their foreign trade law systems.

1. Reasons for Rapid Growth of Counter-Trade

The reasons for the rapid development of counter-trade are summarized below:

(1) *Severe shortage of foreign exchange.* Some countries are constantly short of foreign exchange to meet their import needs. So they will, while purchasing needed goods, request that the sellers undertake to buy their products whose value will be counted to offset their payments. This arrangement also enables some companies to continue with their business without foreign exchange.

(2) *Heavy indebtedness.* Some countries, which have accumulated enormous international debts over the years and have difficulties in obtaining new loans, cannot but adopt counter-trade to carry out business transactions in order to meet their pressing import needs. Besides, the International Monetary Fund (IMF) and the international banking community strongly request that the debtor countries

reduce their imports and expand their exports. Counter-trade opens up a new channel through which debtor countries can continue with their imports.

(3) *Weak market demands.* For a long time now, the international commodity market, particularly for primary products, has been very weak with ever-falling prices. In order to promote product sales, many countries have to rely on counter-trade as an appropriate outlet for their products.

(4) *Rising protectionism.* The Western industrialized countries, in an attempt to protect their own industries against external competition, have resorted to protectionist measures by imposing heavy tariff and non-tariff barriers on imports. The developing countries, in order to expand their exports, are using counter-trade as a means to get around such barriers.

(5) *Improvement of trade balances.* Countries with huge trade deficits are adopting the policy of counter-trade to achieve trade balances by diversifying their trading partners in order to reduce their over-dependence on a few major markets. Counter-trade is helpful for a country or a business firm in exporting products which would be difficult to sell through regular trading forms.

(6) *Upgrading industries.* In order to upgrade their industries when there is a shortage of foreign exchange, developing countries arrange with industrialized ones to either import advanced technologies and industrial equipment from them, or absorb their investment in building local plants by the latter's agreement to buy back the products to offset the payments, or as returns from their investment. At the same time, developing countries can also expand the export of their industrial goods through counter-trade arrangements, an undertaking that would otherwise be extremely difficult.

(7) *Enhancing competitiveness.* Sometimes, firms in industrialized countries have to accept the not-so-favourable form of counter-trade, because they must find a way to export their manufactured goods and machinery products in a fiercely competitive market. Developing countries, for their part, prefer counter-trade because they can make use of the existing marketing channels of developed countries to promote their products and gain access to new markets.

(8) *Relaxed East-West relations.* Over the past decade or two, international relations, including those between the East and West, have become relaxed to some extent, resulting in an increased amount of trading activities between the two sides. Counter-trade, originally a form of trade among Eastern countries, has thus found its way into East-West and North-South trade relations.

2. Development of Counter-Trade

Undeniably, counter-trade is not the best form of international trade in terms of economic efficiency. It has many problems and defects.

(1) *Higher costs.* Counter-trade involves a rather complex and extensive process of negotiation and implementation. It implies frequent co-ordination of relations

between the importer and the exporter, extending on occasion into the spheres of production and distribution beyond the scope of trade itself. So it can be very cumbersome. Negotiation on a single transaction may take several years and involve repeated international travel between two or more countries, expending tremendous financial and human resources as well as unexpected hidden costs. And, there is always the possibility of failure in the end. Owing to the high costs involved, counter-trade often generates less-than-desirable economic results.

(2) *Higher risks.* Counter-trade often involves transaction of large amounts under long-term contracts, which entail greater risks. It is vulnerable to the fluctuation of commodity prices and exchange rates, thus likely to inflict economic losses upon one of the parties. Sometimes counter-trade transactions cannot be implemented due to various factors. To top it all, the importing enterprise or agency often has no marketing expertise on commodities imported through counter-trade. It knows nothing about either their quality requirements, price ranges, or their market demands; hence it faces great risks.

(3) *Incompatibility with the principle of free trade.* GATT and the IMF both advocate the principles of multilateral and free trade, whereas counter-trade is primarily confined to the bilateral sphere. Under counter-trade contracts, the seller undertakes to purchase a corresponding amount of goods from the buyer thus insulating a certain portion of commodities from free competition in the market. Therefore, in a sense, counter-trade is incompatible with the principle of free trade. Though some new instruments have emerged, which would help multilateralize, standardize, and documentarize counter-trade, it will still take time before such instruments can be used widely in international trade.

(4) *Potential negative impact on social and technological progress.* By the very nature of counter-trade, the exporter is required to make concurrent purchases of goods from the importer, thus relieving the importer of worries about market access, and reducing his initiative to improve the quality of his products. Counter-trade is also used frequently by the importer to peddle off his unsaleable goods. This situation prevents developing countries from perceiving the real needs of the international market and hampers their efforts to improve and diversify their products. In the long term, their social and technological progress can be held back, and the competitiveness of their products weakened.

(5) *Occasional upsetting of market stability.* Many countries and firms enter into counter-trade because they are pressed by objective conditions. Goods thus exchanged do not necessarily meet their own needs, so they have to sell them at reduced prices. In addition, counter-trade can lead to a change of traditional supply channels, thus upsetting the stability of the international market.

As mentioned earlier, despite all its problems and defects, counter-trade is used or beginning to be used by over one hundred countries throughout the world. Many developing countries, and some developed ones, are requesting or extensively accepting counter-trade transactions. Some governments do not recognize or even deny categorically that they are engaged in counter-trade for

fear that such acknowledgement might give rise to the accusation that they are violating the principle of free trade advocated by GATT. But their non-governmental commercial entities are eager for such trade. The United States and Japan are but two examples. It can be said, therefore, that the rise of counter-trade has become a fact of life, a current trend in the world. Its development is determined by objective economic conditions independent of people's preferences.

We believe that in spite of all its limitations, counter-trade enjoys advantages that one cannot expect from regular forms of trade. As a more flexible trading form, it can play a positive role in expanding exports, particularly the export of non-conventional items, and ensuring their entry into new markets. Counter-trade should not weaken nor substitute for regular trade but serve as a supplement to it. In the last few years, China has engaged in counter-trade with some ASEAN countries like Indonesia and Malaysia, and each side has some success stories of its own. It is hoped that this form of trade will develop even further as both sides accumulate more experience in overcoming the many difficulties involved. We have reason to believe that counter-trade will play a greater role in expanding China's trade with ASEAN countries. The following is a review and analysis of the practices, current status, and future prospects of counter-trade in Sino-ASEAN trade.

III. China's Counter-Trade Practices

1. Policies and Practices in China's Foreign Trade

Since the founding of the PRC, along with the continuous development of its national economy, the country's administration over foreign trade has undergone a process of gradual change and development. In the early fifties, in view of the needs of domestic economic restoration then, the Chinese Government had clearly declared that China would adopt and implement "the policy of controlling foreign trade and protecting trade" and an all-round administration over import and export was practised through such measures as formulating regulations on customs duties, import and export licences, and the centralized control over foreign exchange. On entering the sixties, a policy of state monopoly was implemented and thus all foreign trade transactions were taken over by the state-owned specialized companies engaged in import and export.

China's foreign trade system has been over-centralized in operation and management. It had hampered the initiatives of the enterprises and became an obstacle to the further progress of foreign trade. Since the implementation of the open-door policy in 1979, China has started to reform its foreign trade system. First, the management power over foreign trade has been transferred to lower levels of control and the sole management by the specialized import and export companies no longer exists. With this change, the state has approved the setting up of over 1,000 foreign trade companies engaged in importation and exportation. Some of these are under the control of the local provincial, municipal, and autonomous region's governments; others are under the control of the various

industrial departments of the central government; and yet others are industry-trade combined companies established by the productive enterprises. The channels for Sino-foreign trade has thus greatly increased. Second, the reform of the trade system requires the separation of the responsibilities on the part of the administrative body and that of the enterprises. The latter will manage themselves independently and the government departments concerned will perform merely some necessary administrative functions over these enterprises.

The reform of the foreign trade system will aim at (a) full transfer of the management power to the lower levels in the future so that the enterprises will be able to choose freely the best economic and rational forms for foreign trade and enjoy full rights in decision-making; (b) the abolishment of mandatory planning and the establishment of direct planning and market regulation; (c) the non-interference by the state in the operation of the enterprises; and (d) the reliance mainly on legal and economic means for the management of foreign trade.

Currently, the forms for Sino-foreign trade are mainly those that are accepted by international practices. On the principles of equality, mutual benefit, and helping supply each other's needs, China has established trade relations with nearly 180 countries and regions of the world, most of which involve direct trade. Trade between China and the Soviet Union, the East European countries, as well as some of the developing countries assumes the form of clearing accounts trade on the basis of bilateral agreements. This part of bilateral trade is characterized by planning to some extent.

For the sake of expanding trade, China adopts, according to international practices, various flexible trade forms, including counter-trade.

2. Development of China's Counter-Trade

China's counter-trade started in the early fifties. Upon the foundation of the PRC, China immediately entered into trade relations through counter-trade with the Soviet Union and other socialist countries, the chief form used then being that of barter trade by open account agreement. This system is still being used in trade between China and the Soviet Union and East European countries.

Since the mid-1970s, counter-trade in its various forms has been vigorously on the rise throughout the world. China expanded the scope of its counter-trade in the early eighties to cover compensation trade and counter-purchase in addition to barter by open accounts agreement between governments. Apart from the Soviet Union and other socialist countries, China is now counter-trading with the United States and Japan as well as many developing countries. The country has gained some experience in this field which can serve as a basis for further expansion.

3. Principal Forms of China's Counter-Trade

At present, China's counter-trade is mainly composed of compensation, barter, and counter-purchase.

Compensation

Compensation is often related to the importation of equipment and technology. There are mainly two forms of compensation used by China: direct compensation (buyback), where the buyback products are generated by directly using the imported equipment or technology; and indirect compensation, where products used as payment for the imported equipment or technology are not buybacks, but are other commodities agreed upon by the two sides. Derived from these two main forms are combinations of direct and indirect compensation, and compensation entered into by three or more partners.

From 1978 to 1985, China signed over 1,300 compensation contracts with other countries and regions, saving over US$1.3 billion in foreign exchange. Of these, the majority fell into the category of direct compensation. The compensated projects were mainly in the areas of light industry, textiles, agriculture, animal husbandry, fishery, metals and minerals, electronics, and the chemical industry. China's major partners in this field are firms in Hong Kong, Macao, and Japan. There are a few other countries and regions, too.

Barter

This is an ancient form of trade which has taken on new dimensions under the present circumstances. It is a direct exchange of commodities of equal values between two trading partners according to their needs. At present, China's major barter transactions are carried out between governments, and roughly fall into two categories. First, there is the package barter deal signed on an annual basis between governments, that is governmental barter trade. This is the most common form used between socialist countries. Having signed the agreement, the governments will delegate the power of negotiation, conclusion, and implementation of specific contracts to state-owned trading corporations. In this kind of trade, each side establishes a general account in a bank, detailing each and every transaction entered into for overall settlement at the end of the year. Balances, if any, are transferable into the agreement for the following year. The other type is in the form of single barter agreements between governments, such as the agreement signed between the governments of China and Sri Lanka on bartering Chinese rice with Sri Lankan rubber at equal values, and the one between China and Equatorial Guinea on the latter's cocoa and Chinese commodities of equal values. At present, barter, mainly in the form of trade by account, constitutes the single largest item in Chinese counter-trade. In 1985, the volume of transactions in this form between China and other socialist countries reached US$5 billion, amounting to 8.3 per cent of aggregate Chinese foreign trade.

Counter-Purchase

It is an arrangement in which one party, when it sells its commodities, must buy a certain amount of commodities from the other party according to agreement. It usually involves two separate contracts specifying convertible currency payments and mutual issuance of Letters of Credit. Commodities trade between the two sides may or may not be of equal value and are not necessarily related in a

direct manner. For instance, the annual co-operative trade agreements between the China National Chemical Import and Export Corporation and such associated firms of Japan as Mitsubishi, Mitsui, and Ito all specify that the Japanese firms must purchase a certain amount of Chinese commodities according to a certain ratio *vis-à-vis* the contracted value of Chinese imports from Japan. China Hua Neng International Electric Development Corporation has also been very successful in arranging counter-purchase with General Electric of the United States, Mitsubishi of Japan, and ARSTON of France, in which these foreign companies undertake to buy Chinese commodities at a ratio of 50 per cent of the value of sets of power station equipment imported by China. At present, China has no separate statistics on counter-purchase, but it is estimated to be quite modest.

Apart from the three main forms of counter-purchase, China is moving gradually towards such other forms as tripartite trade and transit trade. For example, China National Chemical Import and Export Corporation is importing oil from Iran for transit to Yugoslavia. In return China undertakes to provide services to Iran as compensation for oil imports.

4. China's Policies and Regulations Governing Counter-Trade

Although China has been engaging in counter-trade for some years now, its transactions have been largely in the form of governmental barter by open accounts agreement with the Soviet Union and East European countries. Other forms of counter-trade transactions are relatively few in number. Since China has not worked out any special policies and legal regulations relating to counter-trade, the following is only an attempt to summarize existing Chinese policy practices in this field, based on available information and data.

(1) In order to promote economic and trade exchanges between China and other countries the government allows the various import and export corporations and localities to enter into counter-trade arrangements with other countries provided that such arrangements are not made at the expense of regular trade activities.

(2) Counter-trade arrangements can be made with all other countries, but a strong preference is given to those with whom China has trade deficits, through a form of combined import-export so that imports can be used as a leverage for generating more Chinese exports to those countries.

(3) Although China has yet to work out a unified plan specifying which commodities can be counter-traded and which cannot, yet in principle, it stresses that all those commodities which are in short domestic supply, are easy to market, and earn cash are not to be counter-traded, whereas those that are in abundant domestic supply and easily produced are considered appropriate for counter-trade. China especially encourages counter-trade as leverage to generate more exports of machinery and power-generating products.

(4) China, as a planned economy, plans all its imports and exports. All imports contained in the central or local plans are encouraged to be made through

counter-trade. When any commodities other than those specified in the plans are to be imported, the importing entity must itself ensure export supplies and market access for the imported goods.

(5) China provides preferential tariff treatment for compensatory trade. The government stipulates that when Chinese enterprises enter into processing, assembly, and small- and medium-sized compensatory ventures, their raw materials, auxiliaries, packaging materials, and spare parts to be imported according to contract, or their imported processing facilities through compensation, are all exempt from import duties.

(6) Compensation projects are examined and approved either by the central or local governments according to the sums of money involved. Provinces, municipalities, and autonomous regions are empowered to approve projects involving different levels of funding. Governmental barter in the form of open account agreements is carried out according to the plan of the state. Its authorization rests exclusively with the central government. Barter and counter-purchase projects not covered by the state plan are subject to approval by the Ministry of Foreign Economic Relations and Trade (MOFERT).

5. Chinese Institutions Engaged in Counter-Trade

Although China has no specialized counter-trade companies, all firms and enterprises assigned the right to import are allowed to enter into this field. Quite a number of them have even set up their own counter-trade departments. In 1986, the Chinese Government approved the establishment of three new corporations in charge of trade with specific regions of the world. These are the Corporation for African Trade, Corporation for Gulf Trade, and the Corporation for Latin American Trade, in an attempt to promote trade between China and these regions, mainly through counter-trade. Foreign firms interested in doing counter-trade with China can enter into direct contacts with Chinese foreign trade firms; those interested in compensation can contact Chinese production enterprises. All Chinese firms engaged in foreign trade, including counter-trade, are in principle assigned a specific scope of operation. If the imported and exported commodities under counter-trade are within the scope of operation of one single corporation, it is allowed to handle the business independently. And if an overlapping of business operations occurs between two or more firms, these firms can co-ordinate and jointly enter into the process of negotiation, signing, and implementation of counter-trade contracts.

6. Difficulties and Problems

In the last few years, China's counter-trade has achieved some results. Experience has shown that this form of trade is a useful means of expanding foreign trade by increasing exports as well as the imports of certain production materials in short supply on the domestic market, without spending too much foreign exchange. Of all the forms of counter-trade, compensation, which combines

commodity trade, technology trade, and the provision of credits, has an important role to play in effecting technical renovation of the numerous small- and medium-sized Chinese enterprises which are technologically backward and whose equipment is outdated. It also helps to reduce state budgetary burdens.

Of course, China has encountered some difficulties and problems in its counter-trade, particularly in the areas of extra-plan barter and counter-purchase.

(1) *Difficulty in selecting the appropriate commodities.* The dual role of counter-traders as both buyers and sellers makes it rather difficult for them to select commodities which they can supply and at the same time are needed by the other party. Besides, commodities offered by the exporter are often slow-selling products, which is not conducive to rapid agreement. On the other hand, neither party is willing to counter-trade products that can be readily sold for convertible currency.

(2) *Constraints of the existing Chinese foreign trade system.* Under the present Chinese foreign trade system, there exists a distinct division between import and export operations, each having its own targets to fulfil, with little linkage between the two. The importer, whose sole responsibility is to import, is reluctant to involve his imports with the exports of other companies or agencies for fear of hampering his negotiation and conclusion of contracts.

(3) *Incompatibilities between planned and non-planned requirements.* China's import and export commodities are presently divided into planned and non-planned categories. When no import-export link is required, a foreign trade corporation is most hesitant to offer planned commodities within its scope of operation for counter-trade, for fear that it will be unable to fulfil its export targets. Local trading companies, on the other hand, deal mainly in extra-plan commodities if they choose to enter into barter trade. Since extra-plan barter is not allowed unless export targets set out in the state plan and under governmental trade agreements are fulfilled, the remaining commodities are either slow-selling or new and extremely difficult to market.

(4) *Lack of information.* Chinese compensation and extra-plan barter transactions are mainly carried out by local enterprises. They know very little about foreign markets, and even less about counter-trade.

(5) *Inadequacies of related policies and legal regulations.* Owing to a late start in counter-trade, except in the case of government barter by open accounts, China has yet to initiate and develop a complete framework of policies, legal regulations, and rules on it.

IV. Counter-Trade Practices of ASEAN Countries

Since the 1980s, the majority of ASEAN countries have been paying great attention to counter-trade because of slow growth in the world economy, decreasing market demands, and falling prices for raw materials.

1. Indonesia

Counter-trade was declared a government policy in January 1982. It is stipulated that in cases of government procurement or construction contracting, arrangements must be made to export Indonesian products at values equal to those of the imported equipment or products, if Indonesian contracts with foreign firms (except those covering petroleum and natural gas) exceed a value of Rp500 million per contract. But this regulation does not apply to foreign equity joint-ventures with private Indonesian citizens or state-owned firms, nor to projects utilizing preferential loans. In spite of strong objection from Indonesia's trading partners in its initial stage of implementation, this policy has come to be accepted with time. By early 1986, Indonesia had signed counter-trade contracts with twenty-nine countries committing more than US$1.5 billion. The single largest item was a contract with West Germany, which amounted to US$383 million. Other major counter-trade partners include Japan, Canada, the United States, Singapore, Great Britain, South Korea, Romania, and Australia.

Indonesia's largest import item through counter-trade is fertilizer. Also at the top of the list are equipment, train carriages, locomotives, chemicals, and airport equipment. Its major export items through counter-trade are veneer boards, rubber, coffee, tin, fresh prawns, aluminium, tea, and jellyfish.

2. Malaysia

In order to promote counter-trade, Malaysia set up a counter-trade group under the Ministry of Trade and Industries in July 1983 to co-ordinate relevant trade policies. Malaysia encourages counter-trade in the fields of government procurement and projects using government loans or foreign assistance. For instance, when the government invites tenders for a particular project, the bidder who can arrange counter-trade has a greater chance of getting the contract.

Malaysia encourages state agencies and private firms to engage extensively in counter-trade with countries which have contracted major governmental construction projects, or with which Malaysia has trade deficits; socialist countries; and developing countries which have import potentials for Malaysian primary commodities and manufactured goods. The Malaysian Government has also declared a list of commodities that can be counter-traded so as to give counter-trade a well-defined scope. Several traditional products are not included. Other export-oriented regulations have also been promulgated by the government, namely counter-traded products should not upset traditional markets of Malaysian products, and extra exports to a specific market are not allowed unless normal volumes are realized.

3. Philippines

The Philippines has engaged in counter-trade in recent years. In 1982, for instance, it signed a contract with Belgium trading coconut oil for military transport equipment. In the same year, it signed a contract with the Soviet Union

agreeing to provide garments, furniture, sugar, and bananas in return for the construction of a local cement plant. Counter-trade transactions concluded in the Philippines are largely chance deals initiated by foreign parties when the two parties happen to have the needed goods. Up till now, the Philippines has had no established policies or practices relating to counter-trade. Economic difficulties in recent years seem to have created a better chance for counter-trade due to its potential for promoting exports. However, different departments still hold conflicting views on it.

4. Singapore

Singapore has devoted more attention to counter-trade in recent years. The Counter-Trade Service Group, established under the Trade Development Board, is responsible for providing data on trade, assisting in transactions, and helping local firms in establishing business contacts and exchanging market information. The government has taken measures to encourage counter-trade. For instance, starting from 30 May 1986, firms qualified to engage in counter-trade are given certificates of new trades, and are exempt from income tax on their returns from counter-trade for a period of five years. So far, six companies have acquired the status of new trades, of which five are affiliates of foreign corporations. Before a counter-trade company is granted the tax exemption, it must (a) have no less than S$500 thousand of committed capital; (b) do business of at least S$25 million annually; and (c) have two or three experienced counter-trade experts. Apart from the six certified companies, there are a few others whose applications are being examined. Singapore has also sent government officials on promotion tours to Europe and the United States to attract interested firms to establish counter-trade operations in Singapore. Its long-term objective is to make Singapore a counter-trade centre in the region.

5. Thailand

Faced with difficulties in exporting agricultural produce, private firms in Thailand have undertaken several counter-trade transactions with foreign companies. In 1981, for example, Thailand traded rice for Soviet fertilizers, and in 1982 cassava for South Korean fertilizers. In 1986, the Thai Government reached an agreement with the government of Iran on counter-trading Thai rice with Iranian oil. At present, Thai counter-trade is still confined to farm produce and transactions are concluded mainly upon foreign initiatives.

The government's attitude towards counter-trade has been one of non-support, non-intervention, and non-opposition. There are no special legal rules and regulations governing counter-trade nor any specialized agencies in the field. Thailand, as a member state of GATT, believes that counter-trade is at variance with the principle of free trade advocated by GATT. It also believes that counter-trade, for all its advantages for expanding export markets, is risky and may adversely affect the prices of traditional export commodities. Recently, however, the government seems to be paying more attention to counter-trade

and it is reported that a small group has been set up under the Foreign Trade Development of the Ministry of Commerce to study the issue.

V. Counter-Trade between China and ASEAN Countries

As China and ASEAN countries have become more active in counter-trade in recent years, their bilateral transactions have also increased and contributed to an overall development of bilateral economic co-operation and commercial exchanges.

1. Present State of Counter-Trade

Counter-trade between China and the ASEAN countries started in the mid-1970s. In August 1975, one month after diplomatic relations were established between China and Thailand, the Thai Government proposed to counter-trade equal values of Thai rice with Daqing crude and gasoil. A rice-oil agreement was signed, and Thailand used 200 thousand tons of rice to barter 310 thousand tons of Daqing crude and 250 thousand tons of gasoil. This was the earliest counter-trade agreement between China and ASEAN. There has been further development of this trade in the last few years. All the countries of ASEAN, except Brunei, now engage in a certain amount of counter-trade with China.

Principal Forms of Counter-Trade

For the last few years, counter-trade has involved mainly counter-purchase and compensation.

Counter-Purchase. In 1986, China's Coal Import-Export Corporation and Metal Ores Import-Export Corporation reached an agreement with the Indonesian state-owned coal corporation, by which China supplied 100 thousand tons of coal in exchange for 100 thousand tons of cement from Indonesia. The value of this counter-purchase was about US$7.2 million dollars. China first exported the coal, then imported the cement. Separate agreements were signed and Letters of Credit exchanged. In accordance with their scope of operation, the Chinese Coal Import-Export Corporation was responsible for the export part of the transaction, while the Metal Ores Import-Export Corporation looked after the import side. The bank set up counter-purchase bank accounts.

The following agreements also took place in 1986:

1. China reached agreement with a corresponding Indonesian company to exchange veneer boards for bicycle spare parts, jute, and cotton.
2. An import-export company in Dalian, China concluded a counter-purchase agreement with a Malaysian company to exchange soya bean meal for palm oil.
3. The Beijing Foreign Trade Corporation came to an agreement with a Philippine company to export Chinese vermicelli and paraffin wax in exchange for Philippine tin plate and palm oil, to the value of US$550 thousand.

4. A Chinese export company in Wuhan reached an agreement with a Philippine company to export aluminium alloy in exchange for an equal value of semi-finished furniture.
5. The Foreign Trade Development Corporation of Guangdong signed an agreement with a Singaporean company to export rubber tyres to the value of US$100 thousand in exchange for rubber. The transaction was carried out with Letters of Credit, with the bank opening the accounts and assisting in the settlement. Two more similar transactions were completed in 1987.
6. A foreign trade company in Beijing signed an agreement with a Singaporean company to export US$3.3 million worth of circuit plates for large computers in exchange for an equal value of steel.

Compensation Trade. In 1987, the Shuiko Tin Selection Factory in Changning, Hunan Province concluded a compensation contract with the Long Da Mining Company Ltd. of Malaysia. Under this contract, China imported US$120 thousand worth of complete ore selection equipment. Eighteen months after the installation and start of production, the Shuiko Factory was to use 38 tons of tin-in-concentrate as compensation. Both parties also agreed that the Malaysian side was to be responsible for all technical aspects of overall design, installation, trial production, etc. The Chinese side agreed to sell 2,400 tons of tin-in-concentrate to the Malaysian company at a preferential rate 4 per cent lower than world prices for a period of three to five years after production began. This was valued at US$8.4 million. The 4 per cent preferential rate was to compensate the Malaysian side for its technical services.

Other Forms of Counter-Trade

Apart from these two forms of counter-trade, there also are tripartite and transit trade. Both can help to expand China's trade with ASEAN countries. In 1986, a Chinese foreign trade company in Shandong arranged to export to Singapore 5,000 tons of sulphur, 4,000 tons of baryte, and 8,000 tons of calcined bauxite, all to the value of some US$300 thousand. At the same time, it imported through Singapore 5,000 tons of Botswana blue asbestos. Again in 1986, the International Corporation of Economy and Trade in Wuhan, Hubei province exported through a Hong Kong company US$450 thousand worth of sesame seed, and received in exchange an equal value's worth of galvanized iron. According to the contract, the sesame seed was sold to countries of the ASEAN region.

Role Played by Counter-Trade

The above examples show that counter-trade between China and the ASEAN countries takes many forms, and the range of commodities exchanged is slowly increasing. Not only are traditional agricultural products involved, but also vital industrial materials and finished products. A complete counter-trade system for both sides will be difficult to establish for a number of reasons. However, the upward trend of this kind of trade is certain.

Of equal certainty is that counter-trade, because of its flexibility, is playing a positive role in stimulating trade exchanges and the economic development of

both countries. Take the case of the exchange of tyres for rubber between Guangdong province and Singapore. On the Chinese side, this transaction increased sales of the product and opened up new channels for raw materials; on the Singapore side, sales of raw materials were expanded and needed goods imported. Obviously both sides benefited.

Of course, counter-trade between China and the ASEAN countries is still very limited, and it would be inappropriate to overestimate its role. However, the few instances cited above do seem to indicate that with the present stagnation of the world economy, rising protectionism, and falling demand of primary products, counter-trade between China and ASEAN countries can help to expand exports of indigenous products, while enabling imports of needed materials for national construction with a minimum expenditure of foreign currency. While some ASEAN countries have no shortage of foreign currency, others are in the same situation as China and lacking in foreign exchange. Counter-trade seems to be a most desirable means of expanding the flow of commodities, making up for each other's shortages, strengthening economic co-operation, and stimulating national economic development.

2. Existing Problems and Difficulties

Counter-trade between China and the ASEAN countries over the last few years does not lack success stories. However, there have been a number of problems and difficulties which can be summed up as follows:

Insufficient Experience

Counter-trade has certain similarities with ordinary trade payable in currency, but it is also more complicated, and the risk is greater. Problems may arise for both parties in the selection of commodities to be traded, target markets, quantities involved, loans, consignment exchange, etc., and these affect the transaction. Even after the contract is signed, unforeseen hitches may arise. There have been several cases of China-ASEAN counter-trade transactions that either fell through or remained unimplemented because of changes in commodity prices and foreign exchange rates. It has happened that one party has operated at a loss and in order to compensate has quoted prices 20 to 30 per cent higher than normal, making it very difficult for the other party to accept.

Limited Choice of Commodities

It has been stated earlier that the trade structures of China and ASEAN countries are very similar. Imports consist mainly of mechanical equipment and industrial raw materials, while exports are agricultural and primary ore products. The number of commodities which are for export and also needed by the trading partner is thus limited in number. Most of these commodities are traded on cash terms, which further reduces the quantity available for counter-trade. For instance, a country may propose selling rattan furniture to China. Yet China produces this furniture itself, and of better quality too. So, obviously no deal is possible. From China's side, apart from coal, cotton, and a few other commodities,

most of the goods available for counter-trade are minor commodities which do not exchange easily with the major commodities of the other party.

Incompatibilities in Trade Systems

Neither China nor the governments of most ASEAN countries has as yet established a clear-cut policy on counter-trade, with the necessary laws and regulations to control it. There is no effective management organization in place. Certain countries take an ambivalent attitude towards counter-trade, and lack measures to stimulate it. In China, there is clear delineation of operations among the various foreign trade corporations. This means a single counter-trade transaction can involve several departments within a corporation, as well as perhaps several other corporations. Co-ordination becomes a time-consuming and difficult business because no single corporation is in charge. On the ASEAN side, many of the companies which wish to trade with China are family businesses with only one product to sell, and on a limited scale. They do not have the ability to engage in joint import-export operations like large corporations, and so counter-trade is difficult for them.

Shortage of Information

Counter-trade is more complicated and difficult than ordinary trade. Many factors are involved, thus a wide grasp of international market information is needed. China and the ASEAN countries have already acquired a certain knowledge of each other's market needs and consumer habits, but further adaption to the needs of counter-trade is needed, so that more opportunities can be sought. This will improve the rate of successful transactions.

VI. Prospects for Expanded Counter-Trade between China and ASEAN Countries

1. Potentials for Counter-Trade Expansion

There has been a good beginning for counter-trade between China and ASEAN countries. A long history of friendly relations, close geographical proximity, and similarity in life-styles are all favourable conditions for expanding trade. Over the last decade or so, there have been new developments in trade and they have become each other's important trading partners. It is necessary to review past experience and overcome difficulties to improve and expand this counter-trade.

China and the ASEAN countries are all committed to developing their national economies. As these grow, these countries will be able to supply more and more saleable goods to each other, which will find larger markets. China and its ASEAN neighbours are developing countries, but they have different natural resources and each has its technological advantages. Their commodities too can complement each other. For instance, one of the transactions mentioned above involved the import through compensation trade of Malaysian tin-ore selection equipment into China, because Malaysia is advanced in tin mining. China's agricultural

machinery and mini-hydroelectric equipment is also suitable to ASEAN countries. Both trade by cash and counter-trade have great potentials.

The reform of China's foreign trade structure is a strong impulsion to counter-trade. As stated before, the present set-up limits the scope of operations of China's foreign trade corporations, and transaction formalities entail a great deal of red-tape, resulting in loss of trading opportunities and affecting morale. Ever since the implementation of policies of opening to the outside world and invigorating the national economy, there has been a new impetus to economic development. The structural reforms now underway in the area of foreign trade will gradually expand foreign trade enterprises' ownership rights and allow them greater flexibility. This will create a better internal climate for counter-trade.

2. Principal Forms to be Adopted

In recent years, the main forms of counter-trade have been counter-purchase and compensation, with more transactions by the former. This was determined by the trading practices and structures of both parties. In the future, there should not be too much change in this, with counter-purchase still making up the major part of the trade, and compensation taking second place.

(1) *Barter by governments by open account agreement is not a desirable form of trade.* For China, this is the main form of counter-trade, but it is directed primarily at the centrally planned economies of the Soviet Union and other socialist East European countries. The trading partners first sign an agreement to buy from each other a certain cash value of goods or labour over a given period of time (usually one year). Both sides open general accounts in their own bank and keep a record of each transaction. At the end of the year, accounts are settled and any balance can be carried over into the next year. This kind of trade does not involve any foreign currency, there is no money flow, and money is used only as a measure of price. However, this kind of trade can only be carried out in a planned way by state-owned corporations entirely responsible for import and export. Any losses are also absorbed by the state. In view of the fact that ASEAN countries have market economies with foreign trade primarily in the hands of private businesses, this form of trade by open account agreement is not suitable. At most, single barter agreements between governments may be used.

(2) *Counter-purchase is a more suitable method.* This involves the signing of two separate contracts. For any one party, the first contract is for a certain value of exports which are paid for in money; the second contract is for imports either of equal or unequal value to the exports, also paid in money. Both contracts are signed at the same time, but can be implemented at different times. Counter-purchase is flexible and involves money flows, making it very similar to ordinary trade. It is the most popular form of counter-trade used in the world today. In the future, China and the ASEAN countries should adopt this form as much as possible in their reciprocal trade.

(3) *Compensation trade can be used as a supplementary form.* Compensation is often used when the transaction involves one party supplying the other with equipment or technology. China and ASEAN are all developing countries with a generally low level of technology. The machinery and technology they need are mainly imported from the developed industrialized countries, and so compensation trade is carried out more with them. Therefore, there is limited scope for compensation trade between China and the ASEAN countries.

However, both China and ASEAN do have certain technologies that are in the forefront of world standards; or they possess certain technologies that may only be of medium standard but do meet the needs of the other country. It would be possible to have exchanges in these limited areas. Under compensation, the importing side can save foreign exchange, which increases the possibility of trade. ASEAN countries can also act as middlemen in the transfer of technology from the advanced industrialized countries to China.

3. Commodities for Counter-Trade

Chinese Possibilities

Up to now, China has no regulations regarding which commodities can or cannot be counter-traded. Past export transactions have involved primarily rice, cotton, jute, gunny-sacks, coal, agricultural machinery, and other mechanical and electrical products. It has imported timber, steel, cement, veneer boards, pig iron, chemical fibres, and automobiles.

ASEAN Possibilities

These countries have no specific regulations either. Past transactions have involved mainly exports of rubber, timber, veneer boards, steel, cement, tin, aluminium, palm and coconut oil, rice, maize, cassava flour, bananas, sugar, and textiles; imports have been complete sets of equipment, transport and mechanical equipment, chemical fertilizers, petrochemical products, coal, steel, iron ore, rice, cotton, animal feed, and defence equipment.

Possible Transactions

The above lists show that many of China's exports are products the ASEAN countries need to import, and vice versa. China can export rice, cotton, jute, gunny-sacks, coal, petrochemical products, chemical fertilizers, agricultural machinery, and other mechanical and electrical products. China can import timber, veneer boards, steel, aluminium, cement, chemical, fibres, palm and coconut oil.

There have been proposals to exchange Indonesian rubber or cement for Chinese coal; Malaysian rubber and palm oil for Chinese rice and coal; Thai rice and chemical fibres for Chinese cotton and farming machinery. There have been other proposals for Singapore to assist China with its new power stations and

airports through compensation trade by way of crude oil and other ores. Other proposals have been made, but their success will depend on prices and many other factors.

4. Some Recommendations

On the basis of existing conditions and the experience of the past few years, we propose the following recommendations for promoting counter-trade between China and the ASEAN countries.

First, there should be recognition of the role of counter-trade. The countries concerned should clearly recognize that counter-trade is a method of promoting exports, which serves as a useful supplement to normal trade. Specific policies, directives, and principles concerning counter-trade should be elaborated. If both parties so wish, they can follow the Latin American example by signing government agreements on counter-trade.

Second, single barter should be the preferred form. In the ASEAN countries, traders are mostly private businesses and there are relatively few state-owned enterprises. Therefore it is not possible to engage in multiple-commodity barter as China does with the Soviet Union and other East European countries in which settlement is done through the banks. Counter-purchase contracts payable in money seem a more appropriate method. By negotiating a single commodity at one time the transaction should be easier to conclude and implement.

Third, counter-trade should be done on the private as well as on government-to-government basis. Although in ASEAN trade is mainly in private hands, important commodities like rice and oil are often controlled by the state. Counter-trade in these commodities can be between governments, because the risk involved is great and the governments are better able to sustain it. As for counter-trade with private businesses, those with high credibility and strong management should be selected. Business should begin on a small scale and gradually grow.

Fourth, information flows should be increased. Counter-trade is still in a preliminary stage so both sides must increase information flows. Seminars on counter-trade should be encouraged; the organizations concerned can periodically exchange data and information. More use should be made of information provided by ESCAP, UNCTAD, and other international and regional organizations.

Lastly, there should be more training of personnel. The process of counter-trade is complicated, which means greater demands on skills and management. Those involved must have a good knowledge of international finance and trade, be experienced, and have a sound grasp of the details involved. They must know about commodity specifications and prices, markets and channels of distribution, transport and insurance. They should also be familiar with the import-export regulations of each country and their trading habits. They must be clear-headed, resourceful, and able to deal with sudden crises. China and the ASEAN countries

lack such people and so they should provide training for such people as quickly as possible.

It is our hope that trade between China and the ASEAN countries will continue to develop steadily and that counter-trade will play a positive role in promoting it.

APPENDIX TABLE A10.1
China's Foreign Trade Statistics, 1975–86
(In million US$)

Year	Total Trade	Exports	Imports
1975	14,750	7,264	7,486
1976	13,433	6,855	6,578
1977	14,804	7,590	7,214
1978	20,638	9,745	10,893
1979	29,333	13,658	15,675
1980	38,136	18,119	20,017
1981	44,021	22,007	22,014
1982	41,606	22,321	19,285
1983	43,616	22,226	21,390
1984	53,549	26,139	27,410
1985	69,602	27,350	42,252
1986	71,574	30,022	41,552

SOURCES: China's General Administration of Customs, *Customs Statistics 1980–87*; Foreign Economic Relations and Trade Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1980* (Beijing, 1980).

APPENDIX TABLE A10.2
China-ASEAN Trade, 1975–86
(In US$10,000)

	1975	1980	1985	1986
Exports to ASEAN				
Brunei	131	391	294	271
Indonesia	—	6,148	12,502	14,215
Malaysia	10,857	17,378	18,802	20,273
Philippines	4,386	24,455	31,588	15,693
Singapore	23,792	44,521	208,037	121,492
Thailand	1,067	34,321	11,706	15,876
Total ASEAN	40,233	127,142	282,929	187,820
As % of China's Total Exports	5.54	7.02	10.34	6.26
Imports from ASEAN				
Brunei	—	2	1	1
Indonesia	—	7,161	33,203	32,422
Malaysia	5,104	25,478	20,032	18,032
Philippines	2,144	9,471	9,832	13,650
Singapore	3,477	23,990	24,250	55,304
Thailand	1,395	13,139	26,179	28,624
Total ASEAN	12,120	79,241	113,497	148,033
As % of China's Total Imports	1.62	3.96	2.69	3.56
Total Trade with ASEAN				
Brunei	131	321	295	272
Indonesia	—	13,309	45,705	44,637
Malaysia	15,961	42,856	38,834	38,305
Philippines	6,530	33,926	41,420	29,243
Singapore	27,269	68,511	232,287	176,796
Thailand	2,462	47,460	37,885	44,500
Total ASEAN	52,353	206,383	396,426	335,853
As % of China's Foreign Trade	3.55	5.41	5.70	4.69

SOURCES: Same as for Appendix Table A10.1.

APPENDIX TABLE A10.3
China's Balance of Trade with ASEAN Countries, 1975–86
(In US$10,000)

	1975	1980	1985	1986
Brunei	131	317	293	270
Indonesia	—	977	−20,701	−18,207
Malaysia	5,753	−8,100	−1,230	2,241
Philippines	2,242	14,984	21,756	2,043
Singapore	20,315	20,531	183,787	66,188
Thailand	328	21,182	−14,473	−12,748
Total ASEAN	28,113	47,901	169,432	39,787

SOURCES: Same as for Appendix Table A10.1

APPENDIX TABLE A10.4
Growth Rates of China's Trade with ASEAN Countries 1975–85
(In percentage)

	1975–85			1975–80			1980–85		
	Total	Export	Import	Total	Export	Import	Total	Export	Import
Brunei	8.5	8.4	—	19.7	19.5	—	−1.7	−1.6	−12.9
Indonesia	—	—	—	—	—	—	28.0	15.3	35.9
Malaysia	9.3	5.6	14.6	21.8	9.9	37.9	−2.0	1.6	−4.7
Philippines	20.3	21.8	16.4	39.0	41.0	34.6	−6.7	5.3	0.7
Singapore	23.9	24.2	21.4	20.2	13.4	47.2	27.7	36.1	0.2
Thailand	31.4	27.1	34.1	30.7	100.0	56.6	−4.4	−19.4	14.8
Total ASEAN	22.4	21.5	25.1	31.6	25.9	45.6	14.0	17.3	7.5

SOURCES: Same as for Appendix Table A10.1.

APPENDIX TABLE A10.5
Major Chinese Exports to ASEAN Countries, 1985
(In US$10,000)

	Animal Feed	Soya	Tinned Food	Cotton	Raw Medicine	Cotton Cloth	Paper	Por-celain	Coal	Crude Oil	Oil Products	Paraffin	Tools
Brunei	—	—	6	—	—	—	3	3	—	—	—	—	—
Indonesia	122	4661	—	1,236	—	5	—	—	—	—	—	—	—
Malaysia	2,036	1,842	384	83	166	869	472	236	178	—	39	91	287
Philippines	101	—	46	56	—	217	35	5	3,232	12,176	368	139	19
Singapore	2,348	121	1,106	340	738	2,997	596	402	292	142,448	28,192	1,122	344
Thailand	800	—	5	1,475	183	8	164	—	3	—	2,186	236	255
Total ASEAN	5,407	6,624	2,047	3,190	1,087	4,096	1,270	646	3,705	154,624	30,785	1,588	905
As % of China's Total Exports	19.2	24.4	5.4	7.6	6.7	4.4	11.9	5.7	11.9	28.4	21.1	38.4	8.5

SOURCE: China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1986.*

APPENDIX TABLE A10.6
Major Chinese Imports from ASEAN Countries, 1985
(In US$10,000)

	Rice	Sugar	Rubber	Timber	Chinese Medicine	Copper	Steel	Polythene
Indonesia	—	—	206	2,205	25	—	516	—
Malaysia	—	—	4,252	8,292	—	—	10	—
Philippines	—	814	—	56	1	1,147	178	—
Singapore	—	—	2,479	—	460	—	1,427	2,123
Thailand	2,669	2,920	3,202	—	141	—	3	264
Total ASEAN	2,669	3,734	10,139	10,553	627	1,147	2,134	2,387
As % of China's Total Imports	48.1	16.2	81.2	12.4	12.4	2.3	0.4	9.4

SOURCE: Same as for Appendix Table A10.5.

APPENDIX TABLE A10.7
ASEAN Investments in China
(In US$10,000)

	1979–83 Agreement Value	1984		1985		1986	
		Agreement Value	Actual Investment	Agreement Value	Actual Investment	Agreement Value	Actual Investment
Indonesia	—	76	—	173	8	150	49
Malaysia	—	37	57	24	25	24	41
Philippines	428	210	229	4,056	311	381	108
Singapore	5,447	6,256	120	7,551	1,014	14,076	1,362
Thailand	250	2,328	445	1,456	884	1,321	910
Total ASEAN	6,125	8,907	851	13,260	2,242	15,952	2,470

SOURCES: China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade*, 1984–87.

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11
Export Processing Zones: The ASEAN Experience

Mohamed Ariff

I. Introduction

Export processing zones (EPZs) began to make their appearance in Southeast Asia in the early 1970s, when several countries in the region shifted their industrialization and trade strategies in favour of manufactured exports. Several member countries of the Association of Southeast Asian Nations (ASEAN) have established EPZs. Singapore may be considered as one big EPZ, in the sense that industries in this city-state enjoy certain privileges which are quite similar to those offered to EPZs elsewhere in the region. Brunei has no EPZs. The other four ASEAN countries, namely Malaysia, Indonesia, the Philippines, and Thailand, have a number of EPZs. It will indeed be an interesting exercise to systematically study their experience from which some valuable lessons may be learned.

EPZs refer to designated industrial estates specializing in the production of manufactures meant mainly for exports, and constitute enclaves within the economy enjoying favoured treatment with respect to imports of intermediate goods, corporate taxation, provision of infrastructure, and waivers from certain regulations.

While a wide definition of EPZ, as adopted by the World Export Processing Zones Association[1] would include the Singapore and Hong Kong city-states, a narrow definition would restrict the use of the term EPZ to a distinct physical area which is cordoned off. In Malaysia, these zones are referred to as free trade zones (FTZs), as the term emphasizes the enclave nature of the operation, that is free from the trade and customs regime of the country. None the less, we shall use the term "export processing zones", as the main activity of the zones is processing for exports rather than trading as such.

The enclave nature of the operation makes the EPZs particularly attractive to transnational corporations (TNCs), although the investments in the zones are not entirely foreign. TNCs are closely associated with EPZs, as the latter make it possible for TNCs to spread out their production facilities on a world-wide basis. The special privileges given to firms operating within an EPZ are, of course, subject to the conditions that most, if not all of the output is exported and that all imported inputs are either fully utilized within the zones or re-exported.

The export processing activities in the zones have been primarily labour-intensive. Employment is the main reason for countries establishing EPZs, and low labour cost is the primary reason for the TNCs to move off shore. The major manufacturing activities in the EPZs involve light manufacturing processes, such as the production of garments and footwear and the assembly of semiconductors, light consumer electronics, and electrical goods.

The EPZ firms are sometimes described as "footloose", as they are capable of migrating with considerable ease, should the terms and conditions offered by another country be significantly more favourable than that of the present host country. In fact, EPZs may be seen essentially as devices for attracting such firms whose international mobile capital goods can be combined with internationally immobile domestic labour.

EPZs may also be viewed as a means for "exporting" labour indirectly. EPZ firms sell their products abroad and earn foreign exchange, out of which local workers are paid. It is in this sense that employment in the EPZs is similar to sending workers abroad to labour-scarce countries like those in the Middle-East.[2]

In this paper an attempt is made to study the ASEAN experience with EPZs. Singapore and Brunei are excluded, as they do not have EPZs in the conventional sense. Thus, the focus of the present study is on the experiences of Indonesia, Malaysia, the Philippines, and Thailand. Of these, it is Malaysia which has had the longest and most rewarding experience. To be sure, the ASEAN experience is by no means uniform, it would be quite misleading to make any generalization. In what follows, an effort is made to examine the ASEAN experience in a systematic and analytical manner. However, the paper makes no claim to originality, as it is not based on any first-hand information or primary data collection. The paper draws heavily on secondary data provided by a number of available studies. The main contribution of the paper lies in bringing into a sharper focus some of the salient features of EPZs in a comparative framework.

Section II discusses the policy framework within which EPZ operations take place in the ASEAN region. The rest of the paper is structured as follows. Section III highlights the main characteristics of EPZs in the ASEAN region by providing a profile. In Section IV, the economic performance of EPZs is examined. In Section V, an evaluation of EPZs in the ASEAN region and their prospects are studied. Finally, in Section VI, some broad policy inferences with respect to EPZs are drawn in the light of the ASEAN experience.

II. Policy Framework

The last fifteen years have witnessed a rapid proliferation of EPZs in the ASEAN region. Today, there are more than twenty EPZs operating in ASEAN, excluding several licensed manufacturing warehouses (LMWs).[3] The rapid expansion of EPZs within ASEAN is by no means a historical accident. It is the result of deliberate policies designed to bring about important changes in the pattern of production and trade.

1. The Rationale

The ASEAN countries began to adopt export-oriented industrial strategies, starting with Singapore in the mid-1960s, followed by Malaysia, the Philippines, and Thailand in the late 1960s, and by Indonesia in the early 1980s. The main reason for this policy switch was the disappointment with the generally poor record of import substitution. This, however, did not mean the end of import substitution in the region. Rather, it was a case of both import substitution and export promotion co-existing side by side. Obviously, there have been policy conflicts in the sense that measures designed to support import substitution activities tended to discourage export-oriented ones and vice versa. One way of circumventing this dilemma was to create enclaves within which export processing could take place outside the trade and customs regime to which the rest of the economy is subjected. EPZs are thus viewed as devices which have enabled the ASEAN economies to pursue outward-looking export promotion and inward-looking import substitution simultaneously.

Malaysia took the lead by establishing a number of EPZs from 1971 onwards. The Philippines was the next to follow with the establishment of the Bataan EPZ in 1972 and a number of smaller ones in the early 1980s. Indonesia established its first EPZ in Jakarta in 1973 and its second in Batam Island in 1978. Thailand is a latecomer in this regard, as it had no operating EPZs until 1982.

This trend towards EPZs was reinforced by the growing labour shortage and rising wage levels in the industrial countries, resulting in offshore investments in countries with abundant labour, rather than in importing guest workers. This process would have been impossible, had it not been for the technological advances which allowed large-scale production based on standardized components to be subdivided into production processes which could be distributed world-wide. Thus, in the case of electronics, the development of integrated circuits and miniaturized components has reduced the manufacturing activity to component insertion on the printed circuit boards. Textiles is another typical EPZ activity that lends itself to international division of labour.

Protectionist barriers against the exports of EPZs in developed countries tend to be less formidable than those erected against non-EPZ exports, given the highly international character of the EPZ activities. TNCs involved in EPZ activities themselves become a powerful lobby against protectionist forces in their home countries. TNCs have taken advantage of the low or zero tariffs on several products by producing them off shore and marketing them in their home markets. Thus, items 807.0 and 806.30 of the Tariff Schedule of the United States (TSUS) provide for duty-free re-entry into the United States of domestically produced components which have been assembled abroad. In the case of textiles, the main impetus for offshore operation was to circumvent the import quotas imposed under the Multi-Fibre Arrangement.

For the TNCs, the main rationale for operating off shore lies in the enormous savings in labour cost. It has been estimated that the share of labour cost in total manufacturing cost can be reduced from 60 to 20 per cent by locating

semiconductor plants in offshore bases.[5] The substantial cost savings are largely due to the wide wage differentials between developed countries and the ASEAN countries. Thus, for example, labour costs in the semiconductor industry in ASEAN is roughly one-tenth of that in the United States.

2. Objectives

The policy framework for EPZs in the ASEAN region, of course, depends on the objectives ASEAN countries have set for themselves. Although specific objectives for establishing EPZs may vary between ASEAN countries, there are four main objectives common to all, namely employment creation, export promotion, inflow of foreign investment, and transfer of technology.

Employment seems to be the single most important factor which has prompted ASEAN countries to establish EPZs. In most cases, the EPZs are located in areas where there were surplus labour. Thus, the choice of location depended largely on the availability of unemployed labour, although other factors such as the availability of infrastructure have also played crucial roles. With unemployment running at double digit rates in certain areas,[6] it was felt that the establishment of EPZs would absorb excess labour and reduce social tensions.

Export promotion, as an objective, was consistent with the outward-looking posture of ASEAN economies which have traditionally remained fairly open. The precarious dependence on primary exports and the need for export diversification through increased exports of manufactures, especially non-traditional ones, have led the governments to lay considerable emphasis on labour-intensive light manufacturing in which ASEAN countries have comparative advantage. Manufactured exports would not only bring in foreign exchange but also provide an outlet for the growing industries which were constrained by the small domestic markets. The presence of TNCs in the EPZs facilitated penetration into the developed country markets.

EPZs were also seen as a conduit for the inflow of foreign investment into the ASEAN countries. As investment and trade have always been interconnected, more trade called for more foreign investment, which was also needed in some cases to ease the balance of payments strains. Foreign investment is viewed as superior to foreign loans, as the foreign creditors will have to be paid principal and interest in foreign currencies while the foreign investors will have to earn enough before they can repatriate profits. EPZs were therefore designed as enclaves so that foreign investors would find the regulatory environment more congenial.

In addition, there were a number of other objectives, such as technology transfer, linkages, and regional development, in setting up EPZs. It was hoped that EPZs would facilitate the transfer of technology from developed countries to the host countries. It was also envisaged that EPZs would establish linkages with the rest of the economy which would result in positive externalities. EPZs

were also looked upon as a means of dispersing industries to promote a balanced regional development.

3. Incentives

The ASEAN countries offer a number of fiscal and financial incentives to EPZ investors, although the incentives do vary between countries in terms of both variety and magnitude. Fiscal incentives consist of exemptions from corporate income tax, import duties, import quotas, property taxes, and excise duties. Income tax exemptions take the form of tax holidays of up to eight years, or other modes such as accelerated depreciation and indefinite carry-forward of losses. Financial incentives include liberal foreign exchange facilities, unrestricted remittance of profits and approved royalties, and local investment finance on favourable terms. In addition, preferential rates for electricity and water supplies are also offered.

As mentioned earlier, incentives given to EPZ enterprises vary from country to country. Malaysia seems to offer the most generous tax incentives in the region. It provides a variety of tax incentives including pioneer status,[7] labour utilization relief,[8] investment tax credit,[9] accelerated depreciation,[10] export allowance,[11] and export refinancing facility.[12] A large proportion of the EPZ firms in Malaysia started off with pioneer status which proved to be quite effective in attracting foreign investors. In addition to the various forms of tax relief which are also available to non-EPZ firms, EPZ firms enjoy duty-free imports of intermediate goods and capital equipment. As the goods purchased by EPZ firms within Malaysia are treated as exports, they are exempted from excise duty. Sales from EPZ firms to the domestic economy (which cannot exceed 20 per cent of the annual output) are treated as imports into Malaysia, and are thus subject to tariffs, sales tax, and excise duty.

In contrast, the Philippines provides the least generous fiscal incentives for EPZs in the ASEAN region. First, the Philippines does not offer tax holidays to investing firms. Second, the fiscal incentive package given to EPZ firms is fairly similar to that extended to foreign investors outside the EPZs. None the less, the non-fiscal incentives offered to EPZ firms are quite favourable. There are generous deductions from taxable income in the form of accelerated depreciation and carry-over of net operating losses incurred in the first ten years of operation, for a maximum of six years immediately following the year of loss. Other fiscal incentives given by the Philippines include deductions from taxable income of half the cost of training labour. As in the case of all EPZs in the ASEAN region, the Philippines also allows duty-free imports of raw materials, intermediate goods, and capital equipment. In fact, the Philippines exempts such procurements from virtually all regulations applying to imports. Moreover, EPZ firms are also exempt from most municipal and provincial levies.

Indonesia provides a fairly generous incentives package which includes tax holidays of three to five years. Thailand's investment incentives seem more generous in the sense that tax holidays are given for a period of three to eight

years. Duty-free imports of raw materials semi-processed inputs and capital goods are also permitted in Indonesia and Thailand.

Among the non-fiscal incentives, physical infrastructural facilities are probably the most important. A wide range of infrastructural facilities are provided, including roads, railways, harbours, airports, and factory buildings or developed sites. These are supplemented by support services such as electricity, water, telecommunications, sewerage, and waste disposal.

Thus, for example, the EPZ in Jakarta provides standard factory buildings of 2,000 square metres each at subsidized rates, with harbour, airport, utilities, and transport and telecommunication facilities. The EPZs in Penang have leased their land for sixty years (which are renewable) from the State Economic Development Corporation (SEDC) and they enjoy excellent transport and telecommunication facilities, with a seaport eight miles away and an airport just one mile from the zone. In addition, they are provided with standard factory buildings. In the Bataan EPZ of the Philippines, a twenty-year lease of the land (which can be extended to another twenty years) with standard factory buildings is offered. Infrastructural facilities at Bataan are pretty lavish with housing facilities, medical and shopping centres, a golf course, a club house, etc. In the Lat Krabang EPZ (Thailand), land can be purchased or leased, while standard factory buildings are offered on a lease basis. Infrastructural facilities at Lat Krabang include roads, utilities, and flood protection.

4. Administration

The EPZs in the ASEAN countries, with the notable exception of Thailand, are administered by specially instituted authorities which are separate from the central government authorities that administer other industrial estates. In Thailand, the Industrial Estate Authority administers all industrial estates including the EPZs. No separate body has been set up to administer EPZs in Thailand, presumably because EPZs are not all that important for that country.

The Philippines has set up an EPZ Authority (EPZA) which is governed by a seven-member Board of Commissioners headed by the Minister of Trade and Industry. As the EPZA comprises senior officials from various ministries which are concerned with trade and investment policies, there is a close co-ordination among various government agencies at the top level. This arrangement helps expedite the processing of applications and minimize bureaucratic red tapes.

In Indonesia, the Jakarta EPZ comes under the jurisdiction of P. T. (Persero) Bonded Warehouses Indonesia, a state corporation. As this corporation has no authority to intercede between the Jakarta EPZ firms and the various government departments, the former have to deal directly with various ministries and government agencies, including customs and port authorities. Consequently, long delays, red tapes, and corruption are not unheard of.[13]

Malaysia has adopted a decentralized system in organizing and administering its EPZs which are governed by the Free Trade Zones Act 1971. Under this Act, the Finance Ministry may designate any area as an EPZ after consultation with

the state government concerned. State Economic Development Corporations (SEDCs) have been appointed to manage the EPZs in their respective states. Thus, the administration of EPZs in Malaysia differs from that in other ASEAN countries, in that the zones are controlled at the state level without any central government authority over all EPZs in the country. While this might have eased the EPZ administration in the country, the fact remains that there is very little co-ordination between the various SEDCs and that EPZ firms have to deal with the various government departments individually. However, the LMWs are administered at the federal level through the Department of Customs and Excise.

III. Profile[14]

The profile of EPZs in the ASEAN region varies from country to country. Malaysia keeps a high profile, not only in terms of the large number of such zones and the large number of companies involved, but also in terms of the scale of operation and size of labour force. By contrast, Thailand keeps a rather low profile, as its four EPZs (three in Bangkok and one at Lat Krabang) are a recent development. Although there are important differences which distinguish EPZs in one country from those in another, there are many common characteristics, which are almost universal, as was already seen earlier.

1. Location and Size

Malaysia has the largest number of EPZs (11), not only within ASEAN but also in the entire Asia-Pacific region. The Philippines has 7 EPZs, Thailand has 4, and Indonesia has 2. Many of these EPZs are located close to international airports and seaports. Given the extensive international linkages, it is not hard to understand why proximity to harbours is so important for EPZ operations. Materials or components brought in from abroad are sent out again after they are processed or assembled. In the case of electronics, air transport is important, given the high value-to-weight ratio which makes transport cost no more than a small proportion of the total value of output.

The EPZs which are in operation in the four ASEAN countries are listed in Table 11.1. It can be observed from the table that EPZs are more widely distributed within Malaysia, than is the case in the Philippines (Figures 11.1 and 11.2). However, all of the EPZs in Malaysia are located in the west coast of the Malay Peninsula. Penang alone accounts for nearly 50 per cent of the EPZs. In terms of area, the Penang EPZs are far more important than those found in other states. In terms of number of firms, the Bayan Lepas (Penang) zone is the largest with 41 firms, while the smallest is the Prai Wharf (Penang) zone with only 1 firm.[15]

As shown in Table 11.1, ASEAN EPZs range from 10.5 hectares (Jakarta EPZ) to 425 hectares (Leyte EPZ). The Jakarta EPZ is small in size, mainly because it was meant to be a pilot project. The average size of the Malaysian EPZs is 123 hectares, while that of the Philippine EPZs is significantly larger, that is 189

FIGURE 11.1
Location of Free Trade Zones in Malaysia

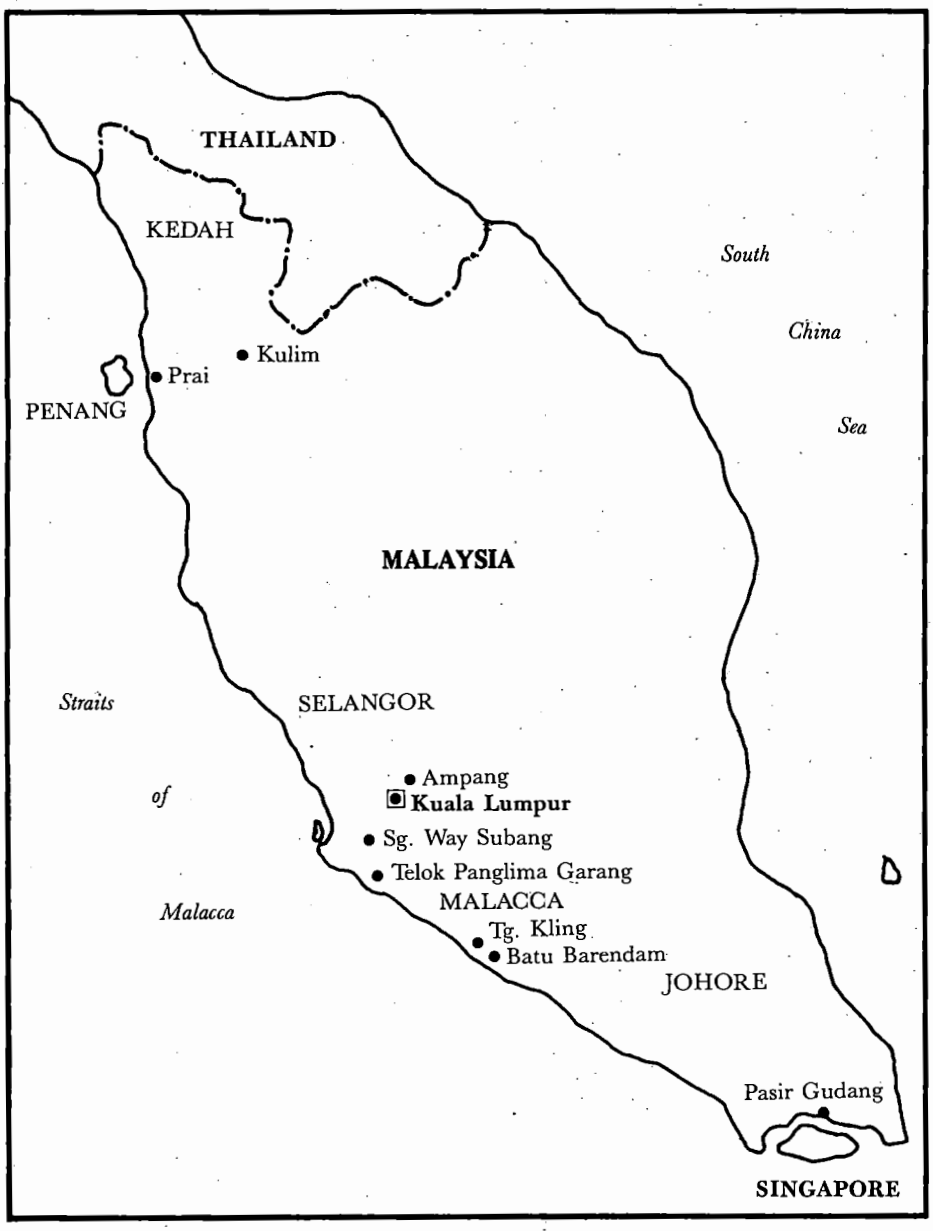

FIGURE 11.2
Location of Export Processing Zones in the Philippines

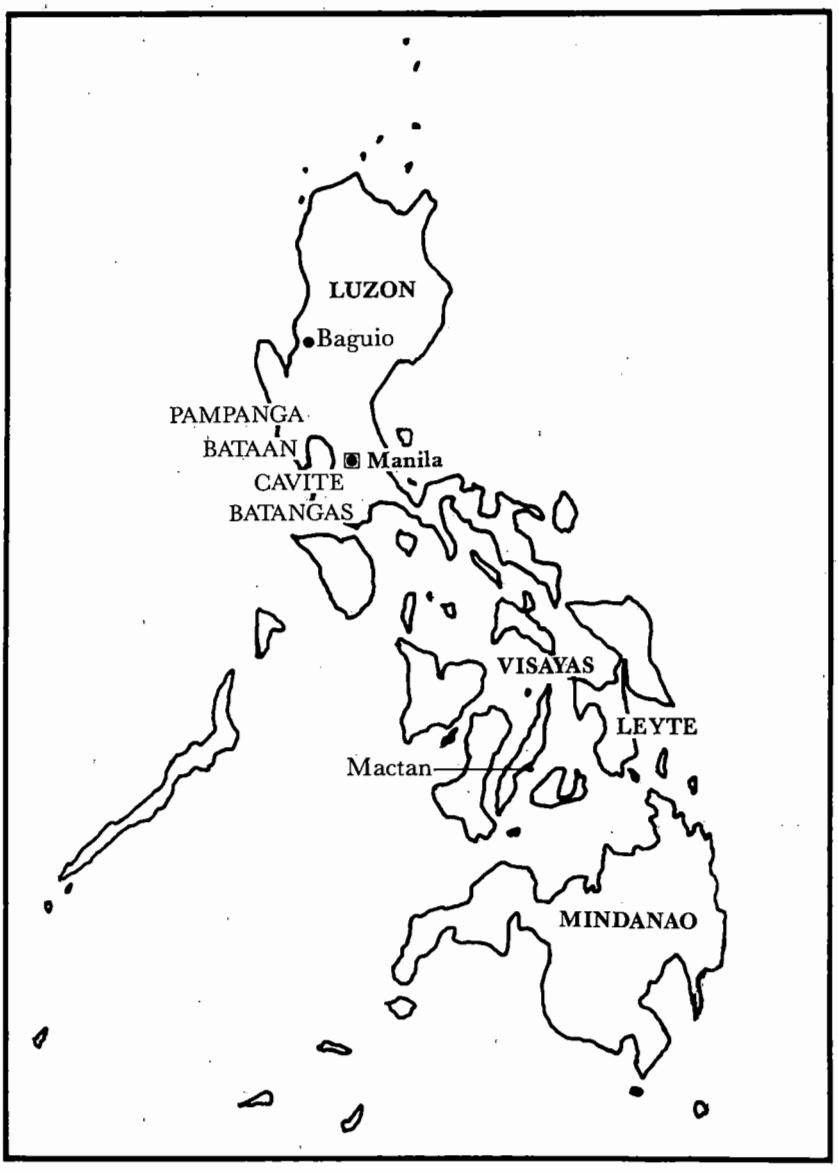

TABLE 11.1
EPZs in ASEAN: Location, Area, and Year in Operation

Country/Area	Year Commenced Operation	Area (ha.)
Indonesia		
Jakarta (Tanjong Priok)	1973	10.5
Batam Island	1978	n.a.
Malaysia		
Pasir Gudang (Johore)	1974	38.0
Tanjong Kling (Malacca)	1974	169.8
Batu Berandam (Malacca)	1973	33.0
Bayan Lepas (Penang)	1972	263.8
Prai (Penang)	1972	302.8
Prai Wharf (Penang)	1972	38.0
Pulau Jerejak (Penang)	1972	19.6
Sungei Way (Selangor)	1973	140.5
Ulu Kelang (Selangor)	1980	50.0
Telok Panglima Garang (Selangor)	1980	49.4
Kulim (Kedah)	1986	n.a.
Philippines		
Bataan	1972	345
Mactan	1979	119
Baguio City	1980	62
Cavite	1985	220
Pampanga	1985	72
Leyte	–	425
Tabangao	–	77
Thailand		
Lat Krabang	1982	27

n.a. – not available.
– not yet operational

SOURCE: ESCAP/UNCTC, *An Evaluation of Export Processing Zones in Selected Asian Countries*, Publication Series B, No. 8 (Bangkok: United Nations, 1985).

hectares. Most of the EPZs in the ASEAN region were established in the early 1970s. After a short lull, a second wave of EPZs was established in the region in the early 1980s.

2. Industries and Products

The main activities of EPZs in the ASEAN region, as indeed elsewhere, fall within the realm of manufacturing. The ASEAN EPZs concentrate on assembly activities, such as electronic and electrical products, and fabrication of products, such as garments and other wearing apparel.

Assembly activities, as represented by electronics and light machinery, lend themselves smoothly to EPZ operations. Parts and components are easily

TABLE 11.2
Selected EPZs in ASEAN by Major Products

EPZ	Major Products
Jakarta (Indonesia)	Garments, electronics, food
Penang (Malaysia)	Electronics, textiles/garments, rubber goods, and metal-based products
Bataan (Philippines)	Electronics, garments, transport equipment
Lat Krabang (Thailand)	Garments, electrical goods

SOURCE: Same as for Table 11.1.

transported from parent companies abroad for simple assembly operations in the EPZs. It is mainly low wages and investment incentives which have caused the labour-intensive phase of the manufacturing operation to be conducted in ASEAN EPZs.

Clothing and textiles represent another important EPZ manufacturing activity that is highly labour-intensive. In some cases, however, garments "manufacturing" also takes the form of assembly operation. Thus, for example, the production of garments in the Jakarta EPZ consisted in the late 1970s mainly of relabelling garments produced in Hong Kong and Singapore so that they can be re-exported as Indonesian exports under the Generalized System of Preferences (GSP) scheme operated by the European Economic Community (EEC).[16] More often than not, however, imported cloths are transformed into garments for exports.

Most EPZs are engaged in the production of a variety of goods except for a few zones with restricted product lines. Products of EPZs include electronics components, electrical machinery, scientific and precision instruments, textiles, garments, footwear, toys, plastic products, and sport goods. Electronics production consists mainly of components, such as semiconductors, and consumer electronics, such as calculators, digital watches, and electronic games. Garment manufacturing consists mostly of clothing and knitted and woven goods, while textiles include both cotton and synthetic fibres. Table 11.2 presents a summary of the product lines in selected EPZs in the ASEAN region.

To be sure, the range of products manufactured varies not only from country to country but also from zone to zone. Thus, in Malaysia, Bayan Lepas EPZ produces mainly electronics components, while the Pulau Jerejak EPZ is meant for shipbuilding industries. Likewise, in the Philippines, the Bataan EPZ concentrates on garments while the Leyte and Tabangao EPZs are meant for large-scale projects such as chemical and petroleum products.

3. Enterprises and Employment

As at the end of 1984, there were 186 firms operating in the ASEAN EPZs (Table 11.3). In terms of the number of firms, the Bataan EPZ in the Philippines tops

TABLE 11.3
Number of Firms Operating in Selected ASEAN EPZs, 1984

EPZ	No. of Firms
Indonesia	
Jakarta	18
Malaysia	
Malacca	9
Selangor	23
Penang	40
Philippines	
Bataan	55
Mactan	6
Baguio City	7
Leyte	3
Tabangao	1
Thailand	
Lat Krabang	24

SOURCE: Same as for Table 11.1.

the list. Conversely, the Jakarta EPZ has the smallest number of firms. However, it must be stressed that the number of firms is a poor indicator of the importance of the EPZs, as the firm size varies considerably. Thus, the Penang EPZ (Malaysia) firms employ an average of 725 workers, compared with less than 100 workers per firm in the Lat Krabang EPZ (Thailand).

EPZ firms, are usually much larger than non-EPZ firms. Thus, for example, the average paid-up capital for EPZ firms in Malaysia in 1981 was US$2.3 million as compared with the average of US$1.1 million for the Malaysian manufacturing industry as a whole.[17] It is also of relevance to note that LMW firms in Malaysia tend to be smaller and more labour-intensive than the EPZ firms. While electronics dominate both groups of firms, garments are proportionately more important among LMWs than among EPZ firms.[18]

As mentioned earlier, TNCs are the major participants in many EPZs in the region, especially those in Malaysia and the Philippines. For example, wholly-owned TNC subsidiaries account for more than half of the firms in the Penang EPZs, while wholly-owned Malaysian firms number only 4, with joint-ventures making up the rest. In the Philippines, TNCs account for about 80 per cent of all EPZ enterprises.

As shown in Table 11.4, TNCs operating in the ASEAN EPZs include Motorola (United States), Siemens (Federal Republic of Germany), Northern Telecom (Canada), Shell (United Kingdom), and Matsushita (Japan). Undoubtedly, American and Japanese firms dominate EPZs in Malaysia and the Philippines in terms of both investment and employment.

TABLE 11.4
Major TNCs in Selected ASEAN EPZs

Country/Area	TNCs
Malaysia	
Selangor	Matsushita, Minolta, NEC (Japan); Monsanto, Motorola, and Texas Instruments (United States).
Malacca	N.S. Electronics (United States); Siemens (Federal Republic of Germany); Kao Denko (Japan).
Penang	Kanebo (Japan); Hewlett-Packard (United States); Bosch (Federal Republic of Germany); Northern Telecom (Canada); and Sony (Japan).
Philippines	
Bataan	Astec Electronics, Inc. (Hong Kong); Hitachi (Japan); and Wilson Electronics (United States).
Mactan	AM Cable TV Industries and Fairchild (United States).
Baguio City	Adriste (Italy); and Texas Instruments (United States).
Tabangao	Shell (United Kingdom).

SOURCE: Same as for Table 11.1.

The Jakarta EPZ is an exception to all these in that none of the developed country firms are directly involved, although there is evidence suggesting that many of the Jakarta EPZ firms are owned indirectly by North American and European firms.[19] None the less, it is investments from India, Taiwan, Hong Kong, and Singapore which are far more important than local investments in the Jakarta EPZ. Developing country participation in the Bataan EPZ is also noteworthy. In addition to TNCs from Hong Kong and Taiwan, there are eight TNCs from other developing countries, which include Malaysia, the Republic of Korea, Singapore, and Indonesia. In Thailand, the Lat Krabang EPZ has a very low level of foreign equity, as 85 per cent of the enterprises are owned by Thais.[20]

IV. Economic Performance

The fact that EPZs have been around for a long time and have grown in numbers in recent times signifies a fairly satisfactory economic performance of EPZ firms. While the economic performance of EPZs do vary from country to country, industry to industry, and firm to firm, the continued popularity of EPZs may be indicative of their importance to the economies of the host countries.

As mentioned earlier, the EPZs in the ASEAN region have been set up with certain objectives. It would be meaningful to examine the economic performance of ASEAN EPZs in the light of the major common objectives.

1. Employment and Wages

Employment generation was an important objective for establishing EPZs, particularly for countries with surplus labour. One important criterion for the choice of EPZ sites was the availability of cheap labour. Other things being equal, the latter consideration would be the most crucial one, given the unskilled-labour-intensive nature of the entire operation.

In Malaysia, where EPZs have made a considerable impact, total EPZ employment in 1982 was approximately 70,000 or 8.8 per cent of the total manufacturing employment in the country. While EPZs, by and large, are relatively more labour intensive than non-EPZ firms, rapid technological changes, especially in the electronics industry, have tended to reduce the labour content of the value added. Thus, for instance, the proportion of wage payments to total sales in EPZ electronics factories has declined from 9.1 per cent in 1973 to 7.4 per cent in 1976. However, this proportion rose subsequently to 8.2 per cent in 1982, apparently due to rising real wages.[21]

As alluded to earlier, the LMWs tend to be a little more labour-intensive than EPZs, but then, in terms of the proportion of wages in total value added, there is very little difference between EPZs and LMWs. In both cases, wages account for about one-third of total value added.

Although EPZs are generally located in areas of labour glut so as to take advantage of low wages and to provide much needed employment opportunities, there are important exceptions. One of these is the Bataan EPZ. A large proportion of the workers in this EPZ are migrants from neighbouring provinces such as Pangasinan and Ilocos, as Bataan itself has a labour shortage. The Bataan EPZ provides employment for about 23,000 workers, each firm employing roughly 400 workers on the average. The Jakarta EPZ provides jobs for only about 7,700 workers, which is not surprising given the small size of the zone where there are only eighteen firms.

A striking feature of EPZ employment in the ASEAN region is the high ratio of female labour. For example, about 74 per cent of the workers in the Bataan EPZ are females. Similarly, in the Malaysian EPZs, female workers account for about 75 per cent of the total employment. The ratio is much higher in certain zones: thus, for instance, at the Sungei Way EPZ (Malaysia) females constitute more than 80 per cent of the direct labour force. In the Jakarta EPZ, the high proportion of female workers is even more conspicuous, as the 90 per cent female component of the work-force is typical of light manufacturing. One consequence of the enclave nature of the EPZs is the absence of trade unions. There is some evidence to suggest that labour regulations are violated in Malaysia[22] and the Philippines.[23] It also appears that work norms are set so high in the EPZs that workers tend to develop physical and mental disorders. The outbreak of mass hysteria in electronics firms in the Malaysian EPZs may be attributed to the excessive stress and strain experienced by the workers.[24]

While it is no secret that most TNCs have moved into EPZs to take advantage of low wages, there is no evidence that workers are being "exploited". Firms in EPZs are no worse paymasters than those outside the zones. In fact, wages in

the Jakarta EPZ are roughly 10 per cent higher than those offered outside the zone.[25] Wages paid in the Malaysian EPZs are fairly comparable to those outside the zones. However, wages paid in the Bataan EPZ appear to be slightly below those paid in similar industries in Metropolitan Manila.[26] But, then, it must be pointed out that living costs are higher in Metropolitan Manila than in Mariveles where the Bataan EPZ is located.[27]

2. Investment Flows

There is little doubt that generous fiscal incentives, coupled with liberal investment regulations that include 100 per cent foreign ownership, have generated great interests in EPZ among foreign investors, especially TNCs. This is attested by the conspicuous presence of TNCs in the ASEAN EPZs.

However, capital investments made by foreign enterprises in the ASEAN EPZs are, generally, relatively small and rarely exceed US$1 million per unit. This is not surprising, as EPZ operations by their very nature are labour-intensive. This is especially so in electronics assemblies and garments manufacturing. Relatively, capital-intensive investments are exceptions, as in the case of the US$39-million car body stamping plant which employs some 300 workers in the Bataan EPZ.[28]

The Malaysian EPZs have attracted the most foreign investments. The total paid-up capital of factories in the Penang EPZ, the largest "free trade zone" in Malaysia, is in the order of US$130 million, 86 per cent of which (US$112 million) is foreign-owned. In contrast, total investments in the Jakarta EPZ amount to US$22 million, of which only 25 per cent (US$5.5 million) is accounted for by foreigners. The investment figures are even less impressive for the Lat Krabang EPZ in Thailand where total investments amount to only US$7.4 million, with foreigners accounting for merely 15 per cent of it (US$1.1 million).[29]

The structure and composition of private capital invested in the Bataan EPZ are such that the role of foreign investment has been minimal. It appears that, in 1979, only 6.4 per cent of the capital consisted of equity, of which only 26 per cent (US$3.5 million) was foreign. It is of interest to note here that 83.6 per cent of the capital invested in the zone consisted of borrowings, 92 per cent of which was domestic. The high debt/equity ratio of foreign firms in the Bataan EPZ is thus very striking indeed.[30]

3. Exports and Foreign Exchange Earnings

The importance of export activities in the EPZs can hardly be exaggerated, as these zones are deliberately designed to cater for the export market. However, nearly all the EPZ firms do sell a small proportion their output in the local market. To be sure, EPZs represent a policy tool for the export diversification drive which is meant not only to reduce the dependence on primary exports but also to increase foreign exchange earnings. While it cannot be denied that the proportions of manufactures in total exports have risen, due in part to the EPZs, the contribution of EPZs to foreign exchange earnings does not appear to be substantial. The latter observation is consistent with the fact that the import content of EPZ manufactures tends to be extremely high.

In fairness, however, it must be pointed out that the export performance of EPZs differs between countries, with some countries more successful than others in using the EPZ as an instrument in their export drive. Malaysia is an outstanding example of a country which has made fairly good use of the EPZs as export springboards, significantly contributing to the expansion of manufactured exports. Malaysia could not have emerged as the world's leading exporter of integrated circuits in so short a time, had it not been for its EPZs. EPZs have also made Malaysia an important exporter of professional, scientific, and controlling instruments and the leading Third World exporter of precision instruments.

In terms of net export earnings, however, the contribution of EPZs seem somewhat unimpressive, due mainly to the heavy import content. Thus, for example, in Malaysia, EPZ imports amount to as much as 95 per cent of EPZ exports. In the case of Indonesia, EPZ imports in 1979 actually exceeded EPZ exports. The Philippine experience also shows that EPZ contribution to net foreign exchange earnings have been negative. While the Bataan, Mactan, and Baguio City EPZs have made positive contributions in terms of net foreign exchange earnings, the Leyte and Tabangao EPZs incurred net foreign exchange losses, with the net losses in the latter zones outweighing the net gains in the former.[32]

4. Linkages and Technology Transfer

The enclave nature of the EPZs in general, and the assembly mode of EPZ operation in particular, seem to have a built-in bias in favour of strong international linkages at the expense of domestic ones. It would therefore seem quite unreasonable to expect EPZs to develop strong linkages with the rest of the economy.

However, domestic linkages are not totally absent. The Malaysian experience in this regard is not too discouraging. Thus, for example, local purchases by the Penang EPZ firms in 1982 accounted for about 5 per cent of their total purchases of raw materials and capital goods. Relatively small as these local purchases are, they represent an additional export outlet for local firms, since sales to the EPZ firms are regarded as exports. Moreover, the Penang EPZ has helped create new industries outside the zone to serve the EPZ firms. These include insurance, freight, stamping, machinery, mould and die-making, and packaging activities that have been established outside the Penang EPZ in response to demand from the firms in the zone.

The ASEAN experience suggests that the extent of linkages between the EPZs and the domestic economies would depend mainly on the EPZ locations and the type of EPZ industries. The more developed the surrounding area, the more extensive the EPZ linkages. Thus, the linkages developed in Penang tend to be much stronger than those developed in Bataan, as the latter represents a relatively underdeveloped part of the Philippines, while the former is far more developed in terms of infrastructure and other facilities. Another reason why the Bataan EPZ has low linkages with the local economy is the heavy concentration on

electronics and optical industries which have a high import content. It has been reported that the local content in the Bataan EPZ fell from 16 per cent in 1972–74 to 6 per cent in 1982, as garments and footwear industries in the zone declined in relative importance to electronics and optical industries.[33] The ASEAN experience shows that garments and wearing apparel manufacturing industries in the EPZs have about 10 to 15 per cent local raw material content. In contrast, electronics and optical instruments in ASEAN EPZs use only about 1 per cent local raw materials.

The performance of EPZs in terms of technology transfer seems even more limited. The predominance of assembly processes entailing mainly unskilled labour inputs and the lack of local research and development (R & D) restrict the scope for the transfer of technology. Thus, for instance, in semiconductor manufacturing, high-tech mask-making and wafer fabrication processes are done in the home country while only the simple assembly processes are undertaken in the EPZs. The low-level technologies incorporated into the assembly operation tends to limit the technological spin-offs. It also appears that much of the technology applied in the zones have little relevance to the development needs of the country's domestic economy.

Having said all these, one must hasten to add that technology transfer via EPZs is not insignificant. Training is given to local technical and production staff in the use of machinery and production technology. It is not unusual for TNCs to send some of their local staff for overseas training in the parent companies. For example, one electronics manufacturer has sent 160 Malaysians to Japan for training.[34] There is also evidence that training provided in Malaysian EPZs to local technicians, supervisors, and managers is considerable and that the employees have found these skills useful even when they had left their jobs for employment outside the EPZs.[35]

V. Evaluation and Outlook

In any evaluation, subjective or normative judgements cannot be avoided. It would, however, be misleading to make sweeping generalizations about ASEAN EPZs. As stated earlier, there are significant differences in the structure and performance of EPZs within a country and between countries. Thus, what is true for one EPZ is not necessarily so for another.

Tables 11.5 to 11.7 provide time series information on three important zones in Indonesia, Malaysia, and the Philippines which substantiate the preceding analysis. An effort is made in this section to evaluate EPZs in the light of the ASEAN experience and to examine their future prospects in the region.

1. A Critique

One criticism that is often levelled against EPZs concerns their very enclave nature. EPZs are treated like foreign territories in the sense that they are not subject to all the rules and regulations of the land. There is evidence to suggest

TABLE 11.5
Indonesia: Aggregate Economic Performance of the Jakarta EPZ
(In million US$)

	1977	1978	1979	1980	1981	1982
Number of firms	4	7	15	18	18	18
Employment (no. of persons)	773	1,653	4,317	6,374	7,520	7,742
Exports	0.9	12.8	5.9	18.7	28.7	37.5
Imports of raw materials	1.2	11.8	6.4	13.0	13.5	13.8
Local raw materials	—	0.01	0.6	1.9	5.2	9.5
Imports of capital goods	0.1	1.0	1.0	1.2	0.8	0.3
Local capital goods	—	—	0.03	0.01	0.03	0.01
Local/Total raw materials (%)	—	0.08	9	13	28	41
Local/Total capital goods (%)	—	—	2.9	0.8	4.6	3.2
Total official taxes	0.01	0.15	0.33	0.40	0.56	0.56
Estimated unofficial taxes	0.23	3.11	1.32	2.76	3.6	3.6

SOURCE: P. G. Warr, "Export Processing Zones: The Economics of Offshore Manufacturing", Australian National University, Canberra, 1987.

TABLE 11.6
Malaysia: Aggregate Economic Performance of the Penang EPZ
(In million US$)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Number of firms	10	21	31	32	33	34	35	38	41	49	50
Employment (no. of persons)	—	15,627	18,569	22,412	25,780	27,895	30,372	35,379	38,355	38,078	36,298
Exports	2.1	53.6	94.2	192.2	274.3	226.1	591.5	1,085.2	972.9	717.5	714.9
Local sales	—	0.1	2.3	1.7	6.9	4.6	9.4	2.6	0.06	14.5	47.1
Imported raw mterials	1.3	55.0	127.8	185.1	237.2	193.6	425.6	492.4	707.0	523.1	520.6
Local raw materials	0.07	0.9	2.8	7.1	6.7	10.5	13.3	14.5	14.5	16.9	22.8
Raw materials from EPZs	—	—	—	5.8	12.0	13.1	40.3	64.5	76.6	48.9	82.3
Imported capital equipment	0.4	13.4	54.7	29.7	9.5	15.2	120.0	53.9	36.6	36.7	36.6
Local capital equipment	0	1.8	18.9	27.0	2.2	3.6	2.6	21.7	3.3	4.0	3.9
Local/Total raw materials (%)	5	2	2	4	3	5	3	3	2	3	4
Local/Total capital equipment (%)	0	12	26	48	19	19	18	29	8	10	10
Total wages paid	0.9	6.3	5.2	14.7	17.4	25.0	43.2	56.6	72.3	80.5	83.4
Total electricity used	0.4	0.7	1.7	5.7	6.9	7.0	8.6	12.1	17.8	23.5	23.2
Total taxes paid	—	—	—	—	—	—	0.14	0.15	0.09	0.74	1.29

SOURCE: Same as for Table 11.5.

TABLE 11.7
Philippines: Aggregate Economic Performance of the Bataan EPZ
(In million US$)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Number of firms	1	5	14	16	39	38	47	51	51	52	52
Employment (no. of persons)	—	1,298	3,321	5,502	8,962	12,821	17,495	18,877	19,204	19,858	19,410
Exports	0.4	0.9	2.1	7.3	22.4	39.7	73.1	98.2	122.7	134.0	159.6
Local sales	—	3.9	6.8	4.3	11.7	13.6	14.8	16.5	13.3	8.2	5.0
Imports of raw materials	0.2	0.5	2.9	7.8	15.8	38.5	47.3	66.4	77.3	81.2	122.3
Local raw materials	0.07	0.2	0.3	0.8	4.2	9.9	3.8	7.9	9.5	7.4	8.5
Local/Total raw materials (%)	30	30	8	10	21	20	7	11	14	9	6
Total wages paid	n.a.	0.6	1.5	2.5	4.3	6.6	9.3	14.4	20.4	22.4	21.8
Total electricity used	n.a.	0.1	0.3	0.5	0.7	0.9	1.2	1.6	1.5	1.7	1.6
Total taxes paid	n.a.	—	0.07	0.3	0.4	0.6	1.5	2.2	1.9	1.7	1.4
Total domestic borrowings	1.8	22.8	61.4	117.8	85.9	89.4	3.3	2.8	2.3	1.9	1.5

SOURCE: Same as for Table 11.5.

that some TNCs in some EPZs do make use of their special privileges to avoid payment of taxes through the transfer pricing mechanisms. Thus, for instance, most EPZ firms in the Philippines declare operating losses, even after several years of operation, and at the same time expand their activities.[36] Owing to transfer pricing, the true foreign exchange earnings of an EPZ firm presumably exceed its declared foreign exchange earnings.[37] There is very little that the host country governments can do about such practices.

Apparently, the most significant contribution EPZs have made is in the realm of employment creation. Even in this regard, EPZs are not free from criticisms. First, it may be pointed out that the overall contribution of EPZs to labour absorption is quite limited.[38] Even in Malaysia, where there is a large number of EPZs in operation, EPZ employment accounts for only 11 per cent of the manufacturing work-force or 1.6 per cent of the total employment in the country.[39] Second, employment effect is limited in the sense that it is often confined to a particular area or age group. Thus, nearly all the EPZ work-force consists of young female workers aged between 16 and 25. There is also the danger that the workers might be "exploited" in the sense they might be overworked and underpaid, as labour laws of the land are waived for EPZ firms.

Yet another criticism that can be drawn from the preceding analysis is that EPZs cannot be an important source of net foreign exchange earnings, given the high import and the low local content of EPZ manufactures. Worse still, as observed above, even the small net export earning can be lost through transfer pricing.

No less serious is the criticism that EPZs are not conducive to the development of backward and forward linkages and the transfer and diffusion of technology. The heavy intermediate-input bias in favour of imports works against the development of linkages so that EPZs may remain "enclaves" detached from the rest of the economy. Besides, there is very little scope for technology transfers given the highly unskilled-labour-intensive nature of the assembly lines. It appears that what transpires in the name of "training" is not technical "know-how" but simply mechanical "show-how", so much so that local personnel employed in EPZs gain little insight into the technology involved.

Cost-benefit studies have indicated that the costs of establishing and maintaining EPZs, by and large, exceed the benefits accruing to the economy of the host country. However, there are significant variations, and no generalization is possible.

The cost-benefit study of the Bataan EPZ in the Philippines showed a negative net benefit. Warr has found that, while the benefits of the Bataan zone in terms of employment and foreign exchange earnings were negligible, costs were sizeable. It is no secret that the Bataan EPZ has generated less than half the employment projected, even after twelve years in operation that has resulted in 20,000 direct jobs. Foreign exchange earnings of US$82 million (1973–82) pale in comparison with the US$192-million cost of building the zone. According to Warr, the estimated loss from the domestic borrowings of foreign firms in the Bataan EPZ alone would cancel all the total gain from the generation of employment and foreign exchange.

Another study by Castro[41] showed that, in the Bataan EPZ, exports and employment have been too far below the projected level, while investment costs of the zone were geared to a high level of operation. With the occupancy rate in the zone remaining at the 50 per cent level, and foreign investment falling short of expectations, the Bataan zone would seem to be a liability rather than an asset, even though Castro herself was cautious about drawing any firm conclusions on the social costs and benefits of the zone.

To be sure, the Bataan EPZ is not the only EPZ in the Philippines facing problems. The Mactan EPZ is also emerging as an expensive EPZ. It was envisaged that this zone would become the headquarters of thirty manufacturing firms and provide jobs for 30,000 people. All these expectations remain no more than dreams. The Mactan zone thus seems to be yet another bad egg in the Philippines' basket of EPZs.

A study of the Jakarta EPZ by Warr also revealed that the costs outweighed the benefits, if the so-called "unofficial levies"[42] are excluded. However, if unofficial levies are counted as a benefit, the net benefit would then become positive. While it cannot be denied that unofficial levies are an important source of benefits from the Jakarta EPZ, such benefits are confined to a limited, privileged group of individuals.

The Malaysian EPZs, in general, appear to be far better off than their counterparts elsewhere in ASEAN. A recent study by Warr has shown that benefits emanating from the Malaysian EPZs, due to employment, use of domestic raw material and domestic capital equipment, purchase of electricity, and payment of taxes, clearly outweigh the costs incurred in establishing, maintaining, and administering the zones. An earlier World Bank study of the Malaysian EPZs also had indicated positive net benefits for Malaysia.[43] All this notwithstanding, it appears that the net gains from LMWs exceed those from EPZs. The main explanation for this is that the LMW programme did not entail the high infrastructure costs associated with EPZs, and LMW firms are, on the average, more closely integrated with the domestic economy than EPZ firms.

2. The Other Side of the Coin

While most criticisms of EPZs are valid, some are exaggerated. In fairness, criticisms against EPZs do not necessarily constitute criticisms against EPZ firms. For, upon closer scrutiny, it appears that the failures of EPZs are mostly due to the ways in which the zones were planned and are run by the authorities.

The Bataan EPZ in the Philippines provides an outstanding case in point. Its poor record can be attributed to several factors, the most important of which is its wrong location in an isolated, undeveloped, and mountainous area. The choice of Mariveles in the Bataan province for the EPZ necessitated costly infrastructural work and expensive movement of workers from outside the province. Evidently, it was political rather than economic considerations that led to the selection of the Mariveles area which was totally unsuitable for industrial development. Secondly, the natural disadvantage of the EPZ site attracted fewer firms than

hoped for, resulting in a low 50 per cent occupancy rate, which in turn rendered the operational cost of the zone extremely high. Finally, policies pursued by the authorities themselves were not always favourable to EPZs. The policy decision to expand the customs bonded warehouse scheme as part of the overall export development programme took the thunder away from the zone. The Bataan EPZ had to compete not only with other EPZs in the country but also with bonded warehouses. The latter have a clear edge over the EPZs in that they do not entail the heavy infrastructural costs associated with bounded zones.

EPZs are often unfairly blamed for the low labour absorption. This disappointment is largely due to the unrealistically high employment targets projected in the feasibility studies of certain zones. There is evidence to suggest that the export sector's employment coefficients are significantly above that of the domestic sector's for Malaysia and the Philippines.[44] EPZ firms are apparently much more labour-intensive than domestic-market-oriented firms. That EPZs account for a small proportion of the total work-force in any country lends no support to the criticism, since much would depend on the number, size, and location of EPZs in any given country. In fact, one must not lose sight of the fact that employment accounts for not more than half the gross benefits from the EPZs in Malaysia and the Philippines.[45]

The charge that EPZs are "sweatshops in the sun" where labour is exploited is also an exaggerated criticism. As was seen earlier, wages paid by EPZ firms are comparable to, if not higher than, what similar workers receive outside the EPZs. That trade unions are kept out of the EPZs and that EPZ firms are not legally obliged to adhere to the labour regulation of the host country do not necessarily imply that working conditions in EPZs are exploitative. There is no evidence to suggest that labour regulations are violated in the EPZs any more than they are outside the zones. In fact, there is some evidence to the contrary: it is much easier for manufacturing firms located outside the zones to evade these regulations than it is for the EPZ firms in the Philippines.[46]

In any case, comparisons of wages and working conditions in the EPZs and elsewhere must be interpreted with utmost caution, since not all the variables in the comparison are standardized. It would be incorrect to compare wages TNCs in EPZs pay to their workers with what they pay in their home countries. The fundamental question is whether wages would have been any higher in the absence of EPZs. Although such a hypothetical question is hard to answer, there is no basis to think that they would have been. In fact, there is little doubt that EPZs have helped raise wages in the surrounding areas by causing, for instance, a shortage of unskilled domestic help for local households. In addition to competitive wages, some EPZs offer superior non-wage benefits such as free transportation and subsidized meals. All these clearly show that EPZ firms are no monsters that prey on defenceless workers.

That EPZs have very little linkages with the domestic economy seems quite obvious. As stated earlier, the enclave nature of EPZs itself is not conducive to the development of such linkages. Duty-free treatment for raw material and intermediate inputs, in particular, tends to discourage the sourcing of such inputs from local suppliers. However, in this context, it would be wrong to ignore the

externalities, which are manifestations of indirect linkages that EPZs have developed, with the surrounding localities. In this regard, the impact of the zones on the economy through the multiplier effect should not be ignored, for incomes generated within EPZs are translated into effective consumer demand outside the zones.[47] Thus, for example, it has been estimated that trade and commerce generated by the Bataan EPZ provide gainful employment to more than 10,000 workers outside the zone. That EPZs generate little net foreign exchange earnings per unit of export is not surprising, given the import-dependent nature of many of their manufacturing activities. Even so, an EPZ firm that exports 100 per cent of its output will have to earn enough foreign exchange to pay the wages and other local costs. In other words, local workers are paid *de facto* in foreign exchange, as they would be if they had gone overseas for employment. This reinforces our earlier observation that the establishment of EPZs is tantamount to exporting labour. Be that as it may, it would be quite unreasonable to expect the EPZ firms to have a high proportion of local value added in order that their contribution in the form of net foreign exchange earnings is substantial. For one thing, EPZ firms, which face intense international competition, cannot afford to have a high local content as it would tend to raise their production cost. For another, local linkages take time to develop.

Finally, it should be emphasized that linkages in the sense of local procurement are only a small part of the broad issue of externalities in the form of technology, skill, and other spill-over effects. As was already noted, EPZs are subject to the criticism that the latter benefits are minimal, as their activities consist primarily of unskilled-labour-intensive assembly-type operations. But, then, there are other externalities which are likely to be more beneficial. Some of these result from increased knowledge of and closer contact with international markets and technologies. Some other benefits result from the international diffusion of imported technology through demonstration and competition effects, inter-firm movement of technical and managerial personnel, and the development of subcontracting networks.

3. Future Prospects

EPZs in the ASEAN region do not seem to have lost their lustre yet, even though cost-benefit studies have thrown serious doubts about their usefulness in certain specific cases. While there is still room for a few more zones to be established in the region, further proliferation of EPZs seems very unlikely. This does not mean the end of the EPZ era in ASEAN. It seems likely that the existing zones will expand their operation in a vertical fashion and shift their mode of operation from assembly to actual manufacturing.

The Malaysian EPZs, especially the electronics production, seem ready for such a restructuring. The Malaysian Government is likely to assign a high priority to the development of an indigenous electronics industry over the next decade and beyond. Malaysia is expected to put considerable emphasis on the production of high value-added consumer electronics products such as video cassette

recorders and digital television sets. Malaysia aims to restructure the electronics sector so that the share of electronic components in the total electronics output will fall from 85 per cent presently to 61 per cent by 1995, and that of industrial electronics will rise from 6 per cent now to 15 per cent in 1995. Likewise, the share of consumer electronics is expected to grow from 9 per cent at present to 24 per cent in 1985.

Such an expansion programme will entail manufacturing of certain strategic raw materials for the electronics industry, such as high purity metals and metal alloys, industrial ceramics, and electronics grade chemicals, and the designing and development of software and integrated systems.

EPZ electronics firms are expected to play a key role in this transformation. Already there are signs that they will respond positively to this call. For instance, National Semiconductor in Penang will be soon setting up Malaysia's first wafer fabrication plant. Similarly, Motorola, which came to Malaysia shortly after National Semiconductor, has a plant manufacturing communication equipment, in addition to two plants making semiconductor components. It may be noted that Motorola has recently expanded its plant in Sungei Way into the largest and most complex semiconductor manufacturing operation of Motorola world-wide.

The future prospects of EPZs in other countries seem less promising. It seems likely that the existing zones will continue their operation without major changes in their scale of operation or structure of production. In any case, their share in aggregate manufacturing employment exports and output will probably remain small. Be that as it may, a few more EPZs may be established in the ASEAN region. Thus, Indonesia has plans to set up EPZs at Surabaya, Cilacap, Banjarmasin, Palembang, Medan, and Ujung Padang, while the Philippines has put on hold its plans for new EPZs in Iloilo, Bacolod, Cagayan de Oro, Albay, La Union, and Davao.

The high costs entailed in the establishment and administration of EPZs have led ASEAN countries to seek alternative instruments of industrial development, such as licensed manufacturing warehouses or customs bonded factories and the duty rebate or drawback system.[48] Thus, it appears that instruments such as these will become increasingly more popular in the region. Besides, the intense competition among developing countries for EPZs and the stiff inter-EPZ competition may lead to an incentives war to attract foreign investors or to prevent the footloose factories from migrating to other countries.

Another factor which may downplay the importance of EPZs in ASEAN in the future is the rising level of real wages in ASEAN countries. Rising real wages tend to erode the comparative advantage in labour-intensive light manufacturing activities that EPZs usually specialize in.

Perhaps the most serious threat to the future of EPZs in the ASEAN region comes from the new micro-electronic revolution that may obviate the need for EPZs altogether. Possibilities for increased automation of assembly operation, complete integration of all stages of production, and industrial synergetic effects may cause TNCs to reduce or withdraw their offshore operations in EPZs. Already, in the semiconductor manufacturing, the mask-making and wafer fabrication processes require less and less labour due to automation.

A more immediate challenge to the EPZs stems from the rising tide of protectionism in the advanced countries. In the wake of global recession of the early eighties, many developed countries, including the United States and the EEC members, have raised their tariff and non-tariff barriers against many EPZ products, especially consumer electronics, garments, textiles, and machinery. No less serious is the threat posed by trade unions in industrial countries which agitate against "unfair competition" from EPZs in low-wage developing countries.

VI. Conclusion

All said and done, the fact remains the EPZs have become increasingly prominent in ASEAN, although their share in aggregate manufacturing employment, output, and exports remains somewhat small. Their importance also varies considerably between countries and no generalization is possible. Thus, the Malaysian experience shows that EPZs can be established and operated at a relatively low cost, while the example of the Philippines suggests that the achievement of limited benefits from EPZs can be quite costly.

It is clear that EPZs are not "engines" of industrial development. For countries in the initial stage of industrialization, EPZs can provide an effective means of absorbing surplus labour. But, then, the problem of unemployment is too vast for EPZs to constitute a major outlet for the surplus labour in the region. Ironically, however, EPZs have played a less important role in the labour surplus economies of Indonesia, the Philippines, and Thailand than in the relatively high-wage economy of Malaysia. Their heavy presence in Malaysia lends some support to the contention that good infrastructure and a stable economic policy environment are the most important factors attracting foreign investors, although the Malaysian incentives package is also generous.

The main economic issue is whether public investment in the establishment and operation of the EPZs is socially productive. As was seen, the empirical evidence is limited and mixed. Interpretations of such evidence must be made with caution, especially since the cost-benefit analyses do not capture all of the variables. One of these is the presence of externalities and demonstration effects which spill over to the rest of the economy. Another is that EPZs, being no more than a partial liberalization of the trade regime, may have the negative effect of deferring moves towards a more substantial policy liberalization. Yet another is that EPZs can lower the welfare of the country through what is referred to as "the locational diversion of resources".[49] In the final analysis, one cannot escape the conclusion that the EPZs will outlive their usefulness, if the countries opt for a general liberalization policy.

What lessons can China draw from ASEAN's EPZ experience? It appears that the usefulness of EPZs will depend on the size of the host economy and its industrial orientation. The bigger the domestic economy and the more inward-looking its industrial base, the greater the need for EPZs, as they can provide an outlet for liberal policies which cannot be extended, for various socio-economic

reasons, to the whole economy. In a small, outward-looking economy, EPZs tend to become redundant as was indeed the case with Singapore. Of course, what is good for a small open economy like Malaysia is not necessarily good for a large and relatively closed economy like China. None the less, the experience of the former is not totally irrelevant to the latter. ASEAN's EPZ experience has shown what liberal policies can do to economic activities within restricted zones. It will be impossible for socialist China to liberalize its whole economy, for such policies may come into conflict with its cherished goals. Such policy conflicts can be avoided if liberal policies are confined to restricted zones as is practised in China's Special Economic Zones (SEZs). However, it will be in the interest of China not to let its SEZs act as enclaves. The more integrated they are to the hinterland through backward and forward linkages, the greater the benefit to the country. In this regard, China, by virtue of its size and diversity of natural resources, stands to benefit much more from EPZs than its ASEAN neighbours, especially in terms of value added.

NOTES

1. See *The Statutes of the World Export Processing Zones Association*, ID/WG/266/6, 28 February 1978.
2. P. G. Warr, "Export Processing Zones: the Economics of Offshore Manufacturing", Australian National University, 1987.
3. LMWs enjoy the privileges similar to those offered to EPZ firms, such as duty-free import of intermediate goods and capital equipment. However, LMWs are physically dispersed and not grouped together in a certain locality, unlike EPZ firms.
4. Mohamed Ariff and Hal Hill, *Export-Oriented Industrialisation: The ASEAN Experience* (Sydney: Allen and Unwin, 1985), p. 19.
5. These are estimates by Finan and cited in ESCAP/UNCTC, *An Evaluation of Export Processing Zones in Selected Countries*, Publication Series B, No. 8 (Bangkok, 1985), p. 13.
6. Penang, for example, had 12 per cent of its labour force unemployed, when the first EPZ there was set up.
7. Pioneer status permits total exemption from the payment of income and development taxes for a period of two to eight years, depending on (a) the amount of fixed capital investment; (b) location; (c) type of products produced; and (d) extent of local raw material content.
8. Labour utilization relief provides tax exemption for two to five years depending on the number of full-time employees. Three more years of tax exemption are granted for preferred location, priority product, and local content.
9. Investment tax credit allows a company to deduct from its taxable income a sum equivalent to at least 25 per cent of the total expenditure incurred on fixed assets on top of the normal initial and annual capital allowance. This tax credit can be increased to a maximum of 40 per cent depending on location, product, and local content.
10. This takes the form of increased capital allowance of 40 per cent, in addition to the normal allowance of 20 per cent. This allows more than 90 per cent of eligible capital expenditure to be written off within five years instead of the usual twenty years.

11. Export allowance amounts to 5 per cent of the increase in the export sales. The allowance is increased to 8 per cent in the case of industrial products with no less than 50 per cent domestic raw material content.
12. Under the export credit refinancing (ECR) scheme, exporters are given both pre- and post-shipment credit facilities at the preferential interest rate of 5 per cent a year.
13. P. G. Warr, "The Jakarta Export Processing Zone: Benefits and Costs", *Bulletin of Indonesian Economic Studies* 19, no. 3 (December 1983), p. 12.
14. This section draws heavily on ESCAP/UNCTC, op. cit.
15. M. Anazawa, "Free Trade Zones in Malaysia", *Hokudai Economic Papers* (Hokkaido), 15 (1985–86), pp. 134–35.
16. This practice was terminated in 1979 when the EEC protested and objected to simple relabelling. See P. G. Warr, "The Jakarta Export Processing Zone: Benefits and Costs".
17. Chee Peng Lim, "Free Trade Zones in Malaysia" (1982), as cited in ESCAP/UNCTC, op. cit.
18. P. G. Warr, "Malaysia's Industrial Enclaves: Benefits and Costs", *The Developing Economies* (Tokyo), April 1987.
19. P. G. Warr, "The Jakarta Export Processing Zone: Benefits and Costs", p. 30.
20. ESCAP/UNCTC, op. cit., p. 57.
21. P. G. Warr, "Malaysia's Industrial Enclaves: Benefits and Costs".
22. M. Datta-Chaudhuri, "The Role of Free Trade Zones in the Creation of Employment and Industrial Growth in Malaysia", in *Export Processing Zones and Industrial Employment in Asia*, edited by Eddy Lee (Bangkok: International Labour Organization, 1984).
23. J. S. Castro, "The Bataan Export Processing Zone", in Lee, op. cit.
24. Jamilah Ariffin, "Women and Work: The Position of Women Workers in the Manufacturing Industries of Malaysia" (Paper presented at the International Seminar on the Position of Women in the Third World, Madras, 1979).
25. P. G. Warr, "The Jakarta Export Processing Zone: Benefits and Costs", p. 32.
26. G. Edgren, "Spearheads of Industrialization or Sweatshops in the Sun?: A Critical Appraisal of Labour Conditions in Asian Export Processing Zones", in Lee, op. cit.
27. P. G. Warr, *Export Processing Zones in the Philippines*, ASEAN-Australia Economic Papers No. 20, (Kuala Lumpur and Canberra, 1985), p. 25.
28. G. K. Helleiner, "Manufactured Exports from Less Developed Countries and Multinational Firms", *The Economic Journal* 83 (1983), pp. 30–31.
29. These investment figures relate to the year 1982.
30. For more details, see P. G. Warr, *Export Processing Zones in the Philippines*, pp. 18–23.
31. ESCAP/UNCTC, op. cit., p. 79.
32. Ibid., p. 76.
33. P. G. Warr, "Export Promotion via Industrial Enclaves: the Philippine EPZs" (Paper presented to the University of the Philippines, School of Economics, November 1984) cited in ESCAP/UNCTC, op. cit., p. 81.
34. Chee Peng Lim and Lee Poh Ping, *Japanese Direct Investment in Malaysia* (Tokyo: Institute of Developing Economics, 1979), p. 35.
35. M. Lester, "Impact of EPZs in Developing Technological Skills in the Semiconductor Assembly Industry" (Paper presented at the Second World Export Processing Zone Association [WEPZA] General Assembly Meeting, Philippines, March 1981).
36. P. G. Warr, "Export Processing Zones in the Philippines", p. 12.
37. Ibid., p. 32.
38. M. Ariff and Hill, op. cit., p. 46.

39. Datta-Chaudhuri, op. cit., p. 15.
40. P. G. Warr has made a number of cost-benefit studies on the Indonesian, Malaysian, and Philippine EPZs. See P. G. Warr's "The Jakarta Export Processing Zone: Benefits and Costs", *Export Processing Zones in the Philippines*, "Malaysia's Industrial Enclaves: Benefits and Costs", and "Export Processing Zones: The Economics of Offshore Manufacturing". In addition, there is a World Bank study on Malaysian EPZs (which however is not readily available) completed in 1983.
41. Castro, op. cit.
42. "Unofficial levies" refer to under-the-counter payments made to customs officials to expedite clearance of goods through the customs. More often than not, clearance of imported raw materials require 18 to 22 signatures while clearance of local raw materials and exports require 6 or 7, and these signatures are usually subject to payment of "unofficial levies" which are estimated to amount to 5 per cent of the value of imported raw materials and 2 per cent of the value of exports.
43. "Trade zone benefits built on shifting sand", *Far Eastern Economic Review*, 14 February 1985, p. 14.
44. P. van Dijck and H. Verbruggen, *Export-oriented Industrialization in Developing Countries* (Singapore: Singapore University Press, 1987).
45. P. G. Warr, "Export Processing Zones: The Economics of Offshore Manufacturing", p. 37.
46. P. G. Warr, "Export Processing Zones in the Philippines", p. 23.
47. ESCAP/UNCTC, op. cit., p. 81.
48. Under this system, import duty paid on raw materials and intermediate inputs is refunded, on the basis of evidence to show that they have been used in the production of manufactured exports. Likewise, excise duty on domestically sourced inputs is also refunded. The latter represents a subsidy to the use of domestic raw materials.
49. Economically sub-optimal locations for EPZs could be rendered attractive by partial decontrol and deregulation. But increased transport costs incurred by private firms, for example, would represent an additional social cost. For elaboration, see H. G. Grubel, "Free Trade Zones: Their Relations to GATT and Development" (Paper presented to the Conference on International Trade Problems and Policies, Monash University, Melbourne, 1984).

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12
China's Experience with Special Economic Zones

Wei Yanshen, Wang Yaoyuan, and Gu Yuanyang

I. Introduction

China's policy of opening to the outside world was made in late 1978. However, places are open to various degrees. Therefore there have been four echelons of opening — Special Economic Zones (SEZs), coastal open cities, coastal open economic zones, and inland.

August 1980 saw "Regulations Governing the SEZs in Guangdong Province" authorized at the fifteenth meeting of the Fifth People's Congress Standing Committee. Shortly afterwards came the promulgation establishing four SEZs in Shenzhen, Zhuhai, Shantou, and Xiamen. In April 1984, the Chinese Government declared the opening of fourteen coastal harbour cities and Hainan Island, after it had gained experience from the four SEZs and the setting up of Economic Zones for Technical Development in open cities with good environment. Some preferential policies concerning the SEZs were to be adopted to attract foreign investment, which aimed to introduce advanced technology and start joint research and production of new technology, products, and industries. January 1985 saw the Chinese Government's decision to open up the Yangtze and Zhujiang River Deltas, and the Southern Fujian Triangle as coastal economic zones. Thus, the SEZs, coastal open cities, economic zones, and inland open China to the outside world, in a sequence which moves from seashore to inland, with different levels and emphases. (Up to the end of 1986, 80 per cent of the operating foreign-invested enterprises were located in the coastal open cities.) Data on the SEZs are given in the Appendices.

It should be pointed out that each of the various levels of opened areas has its own characteristics. SEZs profit much from their grographical position of easy access to the world market. The fourteen coastal cities have advantages mainly in their thriving economy and all kinds of talents. They are places abundant in resources, particularly foundations for industry. The population in these cities is less than 8 per cent of the national total, but the industrial output value accounts for 23 per cent of the national total. Compared to the SEZs and fourteen coastal cities, the open coastal economic zones possess better agricultural resources, with abundant agricultural products and higher commodity exchange rates. The two delta zones are located next to rivers and seas and are thus convenient for

transportation and communication with the outside world. In addition, industrial foundations and managerial proficiency are comparatively good. Therefore, the major tasks for the two delta zones are to combine city and country economies according to the priority order of trade-industry-agriculture in planning, with emphasis on fresh or living commodities, sideline products, textiles, food, etc., for export to earn more foreign exchange.

The Economic Zones for Technical Development (EZTD) differ from the SEZs in the following areas:

1. An SEZ is a comparatively independent administrative area, whereas an EZTD is a piece of land directly governed by the municipality where it is located with more preferential policies adopted.
2. An SEZ is an extraordinary area with comprehensive functions, whereas an EZTD cares mainly about developing new technology and industrial production.
3. In an SEZ, business income taxes are levied at 15 per cent for all the productive and non-productive enterprises of foreign investments, whereas in an EZTD only productive enterprises may enjoy this preferential treatment.
4. In an SEZ, most of the imported consumer goods may be fully or partially exempt from customs taxes, whereas in an EZTD, taxes are levied according to regulations on both imported consumer goods and other materials.

The differences in preferential policies enjoyed in the open areas lie in the extent to which an area is opened.

SEZs are the earliest opened windows in China. The Shenzhen SEZ was declared open in August 1980. It is contiguous to Hong Kong in the south. With a total area of 327.5 square kilometres, it is the biggest SEZ in China. It is a young city opened to the world after a seven-year-long large-scale construction. The Luoho and Shahe new urban districts, Shekou, Nantou, Shadoujiao, and Shahe together form a newly developed urban region as large as 47.6 square kilometres. Up to the end of 1986, the total utilized foreign capital amounted to more than US$1.3 billion, and the domestic investment came to more than RMB500 million. Shenzhen has made an all-around progress in industry, agriculture, commerce, finance, transport, culture, and education. In 1986, the total social output amounted to RMB7.4 billion of which the industrial output value was RMB3.5 billion, more than fifty-eight times that of seven years ago. The export value in 1986 was US$725 million, more than thirty-two times that of 1979.[1]

The Zhuhai SEZ, established in August 1980, borders Macao to the south and is 137 kilometres away from Guangzhou to the north. The total area is 15.16 square kilometres. In 1980-85, its capital construction was ten times as much as that in the previous twenty years. From 1979 to 1985, more than 1,700 agreements with foreign investors were signed. The agreed investment was US$1.75 billion, and the utilized foreign investment was US$330 million. From 1980 to 1985, the annual growth rates of industrial and agricultural output values were 19 and 42.6 per cent for GNP, and 52.7 per cent for financial revenue.[2]

The Shantou SEZ was also set up in August 1980. It is situated on the Chaoshan Plain of Guangdong, near the South China Sea. With the approval of the State Council in 1984, the SEZ further enlarged itself to a total area of 52.6 square kilometres, including the Longhu Export Processing District and Guangao District. Up to the end of 1986, an area of 1.02 square kilometres had been developed for industry, port, and commerce. The total investment for capital construction came up to RMB310 million. Seventy-two investment agreements with the agreed investment of HK$785 million had been signed. The total real utilized funds amounted to HK$218 million. Among the 96 newly built and operated industrial ventures, 70 are mainly export-oriented. In the Canton-Macao region, an area of 1.5 square kilometres has been developed for agriculture and aquaculture.

The Xiamen SEZ, in South Fujian and facing the Taiwan Strait, is a harbour city south of the Shanghai Economic Zone. Established in October 1980 with formal approval, the zone was initially 2.5 square kilometres in size. Then in March 1984 it was decided that the zone be expanded to include the whole Xiamen Island, up to 131 square kilometres in total area. Work has been focused on capital construction. A newly-built Dongdu deep-water wharf and an international airport have been completed and put into operation. An imported program-controlled telephone switching system has been set up. An outward transportation system has begun to take shape covering sea, land, and air. At present, the Huli industrial estate has completed its first-term project. In 1986, the approved contracts of foreign-invested ventures numbered 245; the total investment was US$910 million, of which US$490 million were from foreign investors. About 150 foreign-invested ventures have started operations. The industrial and agricultural output values doubled from 1980 to 1985, and rose to RMB2.7 billion by 1986.

China's SEZs were established according to China's national environment, while taking note of experiences in foreign countries. SEZs are special areas demarcated within China's territory, relying on the interior's economic and technological support and implementing special favourable policies to introduce foreign capital and know-how. SEZs as a display window can play a pivotal role in the areas of technology, knowledge, management, and foreign policies.

China's SEZs have characteristics different from the Export Processing Zones (EPZs) of ASEAN countries. China adopted an economic institution regulated by market mechanism under the state's guidance. Compared to ASEAN EPZs, China's SEZs have some advantages in the investment environment, but there is much room for improvement. Nevertheless, in the near future, China's SEZs and ASEAN's EPZs are bound to achieve mutual progress and prosperity through competition and learning from each other. In recent years, China's SEZs have made great progress in construction, but still have a long way to go in meeting the various demands of China's economic development. Now China's SEZs are in a critical period, turning from a stage of creating foundations to that of building an outward-looking economic structure. With their central tasks of increasing production, upgrading the economic level, and raising efficiency, China's SEZs

are trying their best to increase their attraction to foreign investors and strengthen their export competitiveness.

II. Building Socialist SEZs with Chinese Characteristics

Setting up SEZs is an important step in China's open-door policy and also desirable for broadening China's economic and technological co-operation and exchanges with other nations. These SEZs have their own characteristics, having been built under socialist circumstances.

1. Building a Socialist State-Governed Mixed Ownership and Adopting the Market Mechanism under State Guidance.

China's SEZs are conditioned by the country's overall socio-economic system, like the EPZs and free trade zones (FTZs) in other countries. First, joint-ventures, contractual joint-ventures, and wholly foreign-owned companies (henceforth all referred to as foreign-invested ventures) should become the major ownership structure in order to use foreign capital to introduce advanced technology and management experiences. These ventures have direct participation by the state, or their operation is regulated by the state; thus state capitalism in the ownership structure of SEZs plays a leading role.

The enterprises in SEZs, particularly the foreign-invested ones, have their raw materials and equipment mostly imported and their products mainly exported. Thus, the SEZs' market is closely linked with the international market, and the market mechanism becomes the basis of running the SEZs. For this reason, the production and turn-over of the enterprises in SEZs are conditioned mainly by supply and demand in the international instead of the domestic market. Likewise, the price of products is mostly determined by the price in the international instead of the domestic market; the pressure imposed on the enterprises usually comes from competition in the international rather than the domestic market; and the circulation and financing of capital are in a certain degree conditioned by the rules and conditions in the international financial market. In short, market mechanism influences the SEZs' economic development which, however, is at the same time guided by the socialist nature of the SEZs' economy.

The SEZs' planning management system has changed since their establishment. Originally the planning system was a mixture of mandatory and guidance planning and market mechanism, stressing the management from both the departmental and local levels. Now it is in a transition towards a system with guidance planning and market mechanism combined, with emphasis on the local initiative. In Shenzhen there is no longer any mandatory planning except that of the quota in the scale of capital construction, finance, and foreign exchange. Mandatory planning has been removed in production, exchange, and consumption. Moreover, the focal point of planning work has gradually moved from the

practice of annual planning to analyzing the medium- and long-term programmes and setting the strategic target for SEZ development. As mandatory planning is reduced and removed, the government's way of planning management has also gradually been based on commercial value and supply and demand by using the economic levers of tax, price, wage, and cost to regulate production, distribution, exchange, and consumption. In a word, the regulation and intervention of the state in the SEZs is based on the market mechanism. The state tries to make its planning guidance or macro-control workable.

2. Combining External Linkage and Internal Union

What is the most suitable model for China's SEZs? This is the focal point in Chinese scholars' discussions about the SEZs' development strategy. Three viewpoints have been raised. One is to build an "inward-looking" economy. Almost no one has pursued this choice openly, but some do subscribe to it. Another viewpoint is to build an economy with "two directions". Those who hold this view think that as a trade pivot for internal and external industries and commerce, SEZs can both process the domestic materials for adding value to export, as well as assemble imported spare parts and components, and allow a small part of final products to be sold in the domestic market. The third viewpoint is that the SEZs should be "outward-looking". This is the most commonly held view at present. The reason is that China's SEZs are the product of an open-door policy, and only through this policy and an outward-looking economy can SEZs play the pivotal role of being a display window.

The main features of an outward-looking SEZ are as follows:

1. The investment is mostly from abroad. In view of the fact that the investment in infrastructure, education, culture, and health depends mainly on domestic sources, the proportion of foreign capital in an SEZ should be based on the proportion of the investment in SEZ industries.
2. Products are mostly for export, with the share of exports in total SEZ production increasing gradually.
3. Import and export trade should result in foreign exchange balance or with some surplus.

The main role and benefits of the external linkage of SEZs should be seen in expediting the SEZs' construction and production; helping transform SEZs into outward-looking economies; increasing the exports of foreign-invested enterprises and raising their exchange-earning capacity; introducing advanced equipment; and absorbing scientific management skills and spreading them to the hinterland gradually after absorption, upgrading, and creation.

China has a large territory and population with a vast market and rich human and natural resources. Therefore when SEZs intend to introduce foreign equipment, capital, technology, and managerial know-how, it is possible and necessary to carry out the policy of internal union, through actively co-operating with interior enterprises in talents, technology, capital, and natural resources. This internal union is of varying degrees. It includes the bilateral union of SEZs

with interior enterprises; merging with the enterprises of other provinces and cities, university institutions, and research institutes, with some central department concerned playing the leading role; and taking advantage of the SEZs' special geographical position to make them the base in the development of the hinterland's economic and technological exchanges with other countries and the Hong Kong-Macao region.

Experience has shown that internal union is the basis for outward linkage. The SEZs' role of display window is played mainly through internal union and outward linkage. One of the important advantages of China's SEZs is the support from the immense hinterland in terms of technology, human power, and natural resources. It is internal union that would bring this advantage into full play, and help extend the spread effects into the hinterland. So the sound development of the internal union enterprises creates strong material forces for the development of the SEZs' outward-looking economy. By and large, the SEZs' policy of combining inward and outward linkages to promote horizontal economic co-operation greatly helps the SEZs' economic development, breaking the outdated economic system and spreading the SEZs' effects. In other words, the combination of internal union and outward linkage has two desirable results:

1. It promotes horizontal economic union. This eliminates outdated ideas found in local and departmental exclusive ownership, breaks the pure vertical management and separation of department and local government, and helps the rational structural readjustment of enterprises, products, and industries. Consequently it accelerates the development of the markets of commodity, capital, technology, and labour, and perfects the socialist market system.
2. Through the comprehensive network of industrial blocs, interior enterprises can get information, open marketing channels, and export raw materials or products onto the international market. Besides, through this network the advanced technology and managerial know-how imported into SEZs can be transplanted into hinterland enterprises and may promote technological innovation and the upgrading of products, as well as increase economic efficiency. All these developments create a network system with inward and outward effects which form a favourable precondition for the full play of the SEZs' role as a display window.

3. Building Diversified SEZs

The strategic focus of the SEZs' economic development is to choose the right industrial structure. The common view is that SEZs should emphasize the development of industry. First, in order to fully play the role of display window by introducing know-how and management experience, the SEZs should rapidly develop modern social productive forces which are based on advanced industry. Only a well-developed industry and the formation of many co-related industrial enterprises can lay a solid foundation for the SEZs' economy. Only when the SEZs' industrial products continuously flow into the international market, can

stable exchange and financial revenue be assured. Second, on that solid material foundation, the SEZs' trade and other tertiary services can be expanded and the SEZs' economy can resist any shocks from a fluctuating market. Third, a fully developed outward-looking industry is the basis of building an outward-looking economy. Trade alone cannot sustain long-term prosperity nor fulfil the goal of an outward-looking development strategy. Of course, emphasizing the importance of industry does not mean that the development of trade, information, science and technology, finance, and tourism are not important. In fact, production and exchange interact with each other. The development of the SEZs' outward-looking economy depends on the advance in foreign trade, information, transportation, education, science, and technology.

Currently, China's SEZs are moving towards an outward-looking economy stressing industry and an industry-trade combination. Each SEZ has its own specific characteristics as well as common features with other SEZs. The SEZs should take account of their respective strengths and weaknesses and develop diversified SEZs with specific features.

Shenzhen has the exceptional geographical advantage of being close to Hong Kong, having outward linkage with the international market and inward dependence on the Zhujiang River Delta and the mid-south hinterland where the commodity economy is well developed. Being China's first SEZ, Shenzhen has begun to take shape in infrastructure and other construction. It is a comprehensive SEZ with an outward-looking industry, and combines trade and agriculture at different technical levels.

Xiamen has a good harbour and a long history of developing foreign economic and trade relations. Now it has formed a comprehensive transport network covering sea, land, and air. Because of its special geographical position in relation to China's effort to open trade and communication with Taiwan, Xiamen will open wider and implement some policies of a free port.

Located on the southwest outlet of the Zhujiang River within thirty-six nautical miles of Hong Kong in the east, Zhuhai is connected to Macao by land. It has beautiful scenery and an attractive climate, thus earning the name "pearl of the sea". While it has achieved success in infrastructure and an outward-looking industry and agriculture, Zhuhai has also turned its attention to developing tourism.

Shantou started its construction later and on a smaller scale. In the process of building its SEZ, the local government adopted the following guiding principle: co-ordinate land development with the operation of production and benefits-making. By the end of 1986, half of the investment fund in capital construction had been recovered. Shantou also takes advantage of the surrounding rural areas to establish a fruit-vegetable-based food-processing industry.

III. Main Achievements of SEZs

Around 1985, scholars, including those from Hong Kong and Macao, had a heated discussion about the development of SEZs. Experience has proven that

the policy of building SEZs in China is correct. During the past seven years the Chinese SEZs have made the the following achievements.

1. Large-Scale Capital Construction

The goal of establishing an SEZ is not to build a modern city, but to create a better investment climate to attract foreign capital for export and foreign exchange. So in the initial period more efforts should be put into the construction of infrastructure such as roads, water and electricity, and improving fuel supply, transportation, buildings, and other housing facilities. By the end of 1985, the four SEZs had undertaken more than RMB7 billion of capital construction, developed a sixty-square-kilometre area, and set up nine industrial estates, namely Shenzhen's Shekou, Shanbu, Shahe, Bagualing, and Shuibei; Zhuhai's Jida and Nansan; Shantou's Longhu; and Xiamen's Huli. About 900 new factories have been established and brought into operation, together with subsidiary facilities in commerce, administration, tourism, and services. Now these estates have become very attractive economic paradises.[3]

2. Large Foreign Capital Absorption

The investment environment has improved and the four SEZs have absorbed large sums of foreign capital. By the end of 1986, 2,401 contracts had been signed with foreign investors. The agreed investment was US$6.46 billion, and the realized foreign direct investment amounted to US$2.24 billion. There were 1,490 foreign-invested ventures registered, about one-fourth of the national total. In 1987 the export earnings amounted to US$1.952 billion. In Shenzen about 5,000 contracts were signed by the end of 1986. The agreed investment was US$3.8 billion, of which US$1.3 billion had been put into actual use. Direct investment was US$0.96 billion. Among the 1,200 registered foreign-invested enterprises, more than half are in industry. Of these 250 have begun operations. By the first half of 1987, 322 foreign-invested enterprises had already been operating in Shenzhen.[4] In 1986 the output value of foreign-invested ventures was more than RMB2.3 billion, 40 per cent more than that of 1985. The foreign-invested ventures' share of the industrial output has increased to 65 per cent, and their share of the total export was 60 per cent.[5] These foreign-invested ventures not only strengthened the SEZs' economic power but also contributed to improving management and upgrading technology.

Perfecting the Investment Climate and Promoting the SEZs' Economic Development

In the SEZs foreign capital is mainly invested in industry, transport, and tourism, as well as in projects in airports, power stations, and communication. In 1979 to 1985, among the ventures with foreign direct investment in Shenzhen, 56 per cent were in the secondary industrial sector (with 47 per cent in industry), and 43 per cent in the tertiary sector which plays an important role in upgrading industry, transport, communication, and tourism.

Introducing Advanced Technology and Equipment for Upgrading Industry and Technology of the SEZs

Since 1979, the SEZs have imported advanced equipment, some of which are internationally advanced and some have filled domestic gaps.[6] By absorbing new technology, the SEZs began to develop some new products for the international and domestic markets. Of the more than 800 new products currently produced in Shenzhen, more than 400 are being exported. The industrial enterprises in Xiamen have also made obvious headway in developing new technology. In 1986 the value of output added by new products amounted to more than half of the gross output value of the city's old enterprises. Among the 33 technology-development projects with signed agreements, 3 have reached the international level, 6 belong to domestic new brands, and 19 are of domestic advanced level.

Introducing Scientific Methods of Production and Management to Upgrade Enterprise Administration

Through joint-ventures, the SEZs began to learn to deal with foreign investors. Through vocational training and consultants' guidance and by sending people to study in Hong Kong or abroad, the SEZs have accumulated a pool of skilled workers and key managers.

Utilizing Inward and Outward Linkages to Spread Advanced Technology into the Hinterland

Shenzhen Air Standard Piece Factory has transferred some imported technology and equipment for the innovation of interior old enterprises, and trained a number of technicians for other standard piece factories in the Shantou, Tianjin, Jiangshu, and Zhejiang provinces. By absorbing advanced technology, Zhonghua Bicycle Factory can produce more than 100 kinds of bicycles which have been exported to the United States and Europe. Now the factory is co-operating with more than twenty domestic factories to produce more competitive bicycles for the international market.

3. Developing an Outward-Looking Economy to Expedite the SEZs

Chinese SEZs have all made some achievements in industry, especially in Shenzhen, whose industrial production has been upgraded and begun to shift towards an outward-looking orientation, as it moves from the ground-laying to the development stage.[7] By the end of 1985, Shenzhen had 900 industrial enterprises, 600 more than in 1979, and the employees numbered 70,000, eight times that in 1979. Now Shenzhen has its own industries, such as electronics, light industries, textiles, clothing, food, building materials, machinery, chemicals, household electric appliances, and automobiles. The industrial output value came to RMB3.5 billion in 1986, more than forty times that of 1980; the share of industry in the national income rose to 32 per cent, and the foreign exchange earnings from industry accounted for 60 per cent of the total. So industry has become the leading sector in the promotion of the SEZs' economic development.

During the initial stage of building an outward-looking industry, Shenzhen mainly engaged in labour-intensive processing with customers' materials and with imported assembly components. Since 1982, however, Shenzhen has begun to deepen its industrial development as seen in the following:

1. *Gradually shifting industry from mainly processing of materials to mainly developing its own products.* In 1986, the export value of the SEZs' own industrial products came to 70 per cent of Shenzhen's total manufactured exports.
2. *Improving the technological structure of industry step by step.* The proportion of technology-intensive enterprises rose from 3 per cent before 1983 to 5 per cent in 1984, and that of the labour-intensive enterprises fell from 56 to 50 per cent. Among the 106 newly operated ventures in 1984, 11 per cent were technology-intensive, 59 per cent were with appropriate technology, and 30 per cent were labour-intensive.[8]
3. *Shifting the marketing structure of industrial products gradually from the domestic to the external market.* The share of exports increased from 37 to 51 per cent from 1985 to 1986.[9] In 1986 the value of exports of cotton yarn, printing and dyeing cloth, linen and cotton cloth, knitting goods and textile instruments, radios, recorders, TVs, and electronic clocks produced by Guanmin Overseas Chinese Electronic Company reached more than 90 per cent of total output. The development of an outward-looking industry has laid a solid foundation for the SEZs to widen and increase exports, which in 1986 increased by more than 20 per cent in Shenzhen, Zhuhai, and Shantou. In these SEZs a number of ventures have more than 60 per cent of their products sold abroad. Their export market has extended from the Hong Kong-Macao region to more than ten countries, including Europe, the Unites States, and Japan.

4. Reform of the Economic System

In order to raise the economic efficiency of capital construction, it is necessary to reform management. In project construction, the old method of planned assignment has been abandoned. Now the construction schemes are assessed beforehand, the building companies submit a tender, and the management of a venture is contracted. This experiment has been extended into the interior with some favourable results.

The reform of the financial system has been in favour of financing the construction of SEZs. In order to meet the demands of the SEZ's economic development, since 1986 Shenzhen has started to create a new capital management system which allows the local management a leading role and stresses horizontal union. The advantage of the new system is that it makes the fund flow and economic structure more rational, in favour of macro control. With the change of the senior-junior banks' relationship in fund management, the equality principle in arranging credits has been broken. Now the specialized banks can freely finance and make use of funds within the quota stipulated by the People's Bank of China, thus greatly promoting horizontal integration.

To allow enterprises initiative in financing as well as to fulfil their export task, Shenzhen's Industrial and Commercial Bank and the Shenzhen branch of the Bank of China recently introduced some new loan forms, and a turn-over quota or ration loan, under which the enterprises can, within certain limits, utilize funds whenever they need to without asking for approval at every step. At the same time when professional banks are intensifying reforms, some large ventures can begin to set up their own financial organizations. An example is the Shenzhen Development Financial Company, which has signed financing agreements with foreign banks from Canada, France, Japan, and Hong Kong, and raised RMB funds in the form of issuing bonds and stocks in Shenyang and Guangdong.

The distribution system has been reformed to meet the needs of market regulation. The bottleneck in wholesaling has been broken to establish a competitive system of commerce. For trade, the exclusive monopoly and separation between domestic and foreign business have been removed to enliven business. As regards price, there is a mixed system of planned, floating, and free prices. The price system is also allowed to serve as an economic lever to improve distribution and sustain market prosperity. The systems of hiring labour and wage have also been reformed. Shenzhen takes the lead in putting aside the traditional way of centralized employment and assignment, and transforming the fixed-labour system into a contractual-labour system, which encourages the workers to absorb knowledge and technology. The cadre and personnel system has been changed into an appointment system, with a country-wide public advertisement for people with various specialized skills and management talents urgently needed by the SEZs. The new system promotes better allocation of human resources.

To reform organization, government administration has been simplified and some power has been decentralized to enterprises. From 1980, Shenzhen has conducted two experiments in the administrative system, whereby some organizations were simplified and the approval ladders were lessened. All these have greatly favoured the SEZs' economic development. Based on the experience of these years, Shenzhen made a new reform plan in municipal administration in the beginning of 1987. In this plan a simplified approval process, audit, co-ordination of administration, supervision, consultation, a feedback system, management efficiency, and less red tape are all emphasized. By rescinding and merging some overlapping bodies, Shenzhen has reduced the number of its bureau-level organizations from seventy to thirty-nine.

5. Consolidation of Ethics and Culture

While building the material base, China's SEZs also put efforts into the construction of an ethical and cultural base. Shenzhen, for instance, has stipulated the "Outline of Building the Socialist Ethical and Cultural Civilization" in the Shenzhen SEZ and the "Guidance of SEZ Cadres". Shenzhen is trying to cultivate a new socialist type of people with ideals, morality, culture, and discipline, and build a favourable environment for the SEZ. On the one hand, according to the features and problems emerging in various stages of the SEZs' construction,

Shenzhen is trying to carry out its thought education programme with clear aims. It pays attention to popularizing knowledge of the law and improving the legal system to make the cadres abide by the law and live up to the socialist morality. On the other hand, in order to sustain the healthy development of ethics and culture, Shenzhen is also stressing the construction of its educational and cultural infrastructure, including the building of Shenzhen University, as well as a gymnasium, library, science centre, museum, theatre, and TV station. These create the basis for the SEZ's promotion of ethics and culture which will play an active role in Shenzhen's internal and external linkages in the fields of culture, education, art, and sports.

IV. Problems Facing the SEZs

China's SEZs have achieved some progress, but still face many problems and a rather big gap between expectations and achievements.

1. Rationalizing and Readjusting the Scale and Structure of Capital Construction

Experience so far has indicated that a rational investment scale and structure is an important basis and guarantee for the economic development of SEZs. One reason is that a rational investment scale and structure will ensure maximum output with minimum input. Another reason is that the readjustment of investment structure and direction tends to be a critical measure in redirecting the SEZs' economic strategy. It is the first step in changing the industrial structure of the national economy and achieving the optimum allocation of productive forces.

China's SEZs have made significant progress in capital construction since their establishment, but there are also some problems. The investment scale is an example. In Shenzhen, for instance, the scale of investment in capital construction, particularly that of internal union ventures and projects financed by the municipal government, exceeded the target by 90 per cent in 1984 and by more than 40 per cent in 1985. There emerged a so-called investment "starvation", where the banks vied with each other in giving loans, and the enterprises strove to start new projects. In order to attract foreign capital and create a favourable investment climate, it is necessary to make the SEZ's structure of capital construction emphasize the tertiary sector at its initial stage. But if hotels, restaurants, and commercial and office buildings are built in excess, then their utilization ratio will be very low.

In view of that, more attention is now paid to control the scale of investment and readjust the structure of capital construction. For one thing, the utilization ratio and project efficiency should be investigated. The projects being built should be comprehensively evaluated as to their benefits and costs. Some of them should be reduced in scale and others stopped. Projects of different kinds should be co-ordinated, whether they are in or out of plan, major or common, productive

or non-productive. The efficient and quick-yielding projects should be encouraged, but projects such as high-class hotels, restaurants, and commercial buildings should be scaled down to ensure the evolution and development of an outward-looking economy.

Experience has shown that a strict control of the scale of capital investment and a rational readjustment of structure have led to the continuous, stable, and co-ordinated development of SEZs. While the investment in capital construction decreased by 40 per cent in Shenzhen in 1986, the industrial output, export, financial revenue, and tourism exchange income all increased sharply. Due to the contraction of non-productive projects, the proportion of investment in industry, transport, and energy has increased by more than 10 per cent. The number of newly-operating industrial ventures rose to 153, with a record 85 being foreign-invested. These developments indicate that contraction of capital construction does not mean a scaling down of investment or foreign capital participation. On the contrary, with new orientation, the leaders at all levels will further improve the investment climate by improving the infrastructure in transport and municipal utilities, and promoting efficiency.

2. Improving the Investment Environment

An investment decision by investors is usually made only after weighing the overall advantages and disadvantages of the investment climate. So a favourable investment climate is essential for the SEZs to effectively attract foreign capital and absorb foreign technology for the strategic goal of an outward-looking economy. Ever since its establishment, every SEZ has put a significant amount of human and material resources into speeding up infrastructural construction with the aim of creating a more favourable environment, including living facilities and infrastructure in transport, electricity, communication, water supply, and work-places. These comprise the "hard environment". However, the investment environment also includes the "soft environment", namely economic law, administrative management, production co-ordination, market system, and personnel quality. At present the "hard environment" is fairly satisfactory. The improvement of the "soft environment" appears more important. The following courses of action are urgently needed:

(1) Preferential policies and charge systems should be further improved. Currently some foreign-invested ventures in SEZs are confronted with difficulties and problems such as financial loss, lack of circulation funds, and exchange imbalance due to shortcomings in policy, along with some management problems. The SEZs have begun to make some improvements and readjustments. Particularly after the promulgation in October 1986 of the "State Council's Stipulation For Encouraging Foreign Investment", the so called "22 Rules", the SEZs have introduced additional measures of preferential treatment for export-oriented and technically advanced ventures. The promulgation and implementation of these rules led to a favourable reaction both at home and abroad.

It should be noted that while the reduction or exemption of income tax is very important, investors from foreign countries which have not signed the agreement with China on avoiding double taxation usually do not show much concern for this incentive. What concerns them most is the reduction of charges on transport, water and electricity supply, wages, and real estate in order to make their products internationally competitive. Recently some departments have gone too far in imposing charges and fees, thus adding more burden to foreign investors and damaging the SEZs' image. The "22 Rules" reaffirm that the irrational charges should be stopped. On the basis of that rule, SEZs have made their respective regulations for implementation, which stipulate that enterprises have reason to refuse payment of the charges not affirmed by the governments of the province and city. Departments and their heads who violate this rule ought to be penalized. At the same time SEZs have investigated causes of irrational charges, unreasonable rises in price, and arbitrary fines. For instance, Shekou has reduced more than fifty charges; the average reduction rate is more than 40 per cent.

(2) Administrative efficiency should be promoted and the standarized management of foreign capital enhanced. The institutional system of SEZs is being reformed. But poor work-style, too many bottlenecks, red tape, and inefficiency still exist. In order to promote efficiency and co-ordinate the services provided to foreign investors by various departments, in 1986 the SEZs set up a leadership group for foreign investors or a service centre for foreign investment. Some SEZs are trying to implement a united office work system. Also, in 1986 the SEZs set up a management group for foreign investment, which is responsible for making macro decisions regarding the introduction of the foreign capital with regards to strategy and policy measures, and for co-ordinating the approval of projects. The group also monitors foreign-invested ventures, providing them with guidance to improve their performance and increase their attraction to foreign investors.

(3) The economic laws and regulations should be perfected. In recent years China's SEZs have drafted and published regulations with approval from the People's Congress at the provincial and national levels, which assure the rational performance of the SEZs' economy. But these regulations are far from being perfect, and need to be further improved and supplemented as regards the preferential policy and investment guarantee. Therefore, after the promulgation of the "22 Rules" and some other regulations, the SEZs at once implemented them and made some supplements to help ventures balance foreign exchange accounts and simplify procedures, and guarantee their independence.

3. Expediting the Development of Outward-Looking Industries

To fully play the role of display window, SEZs ought to regard the adoption of advanced technology as an important task, building step by step an outward-looking industrial structure supported mainly by advanced technology. But because the original industrial base and technology in Chinese SEZs are relatively backward, fuel supply is not sufficient. Moreover, with prevailing international

protectionism, it is very difficult for SEZs to import advanced technology and develop technology-intensive industries. Therefore, to develop an outward-looking industry in the near future, China should combine economic rationality with technical advance and short-term goals with long-term strategies. China should not only consider the advanced level of technology, but also the country's absorptive capacity, the SEZs' economic support capacity, economic efficiency, and export potential. In the near future, most of the country's attention should be focused on developing traditional industries equipped with relatively advanced technology, and exporting their products as far as possible. Some export-oriented labour-intensive industries should also be developed, but not too much. With their technical abilities enhanced, the SEZs will develop technology-intensive industries in order to finally create an outward-looking industrial structure which is focused on advanced technology.

Several levels of industries should be developed in the SEZs in the near future. The first level is the kind of industry which utilizes the results of modern technological revolution to develop new products. It includes the application of micro electronic technology and computers, optical communication, and new food and pharmaceutical industries. Such industries will be only a small part of the whole industrial structure, but China must make some technical breakthroughs in its products in the short-term for the international market. The second level comprises the traditional industries equipped with advanced industrial instruments, including electronics, petroleum chemistry, textiles, new building materials industry, and some precision machinery industries. The industries at this level form the largest part of the whole industrial output. Their needed technologies can easily be imported and absorbed, and their products can easily penetrate the international market. At the same time, through technology transfer, they can play the role of display window for the domestic enterprises and earn more foreign exchange. The third level comprises the labour-intensive traditional industries. These form a small part of the whole structure, but should be encouraged if their export potential is good.

In short, to develop an outward-looking structure, the SEZs should, on the basis of international demand, produce light, small, precise, and brand-new products. They should stress the development of new products, quality improvement, cost reduction, and delivery of goods on schedule. At present the SEZs' industrial products have three destinations, namely export, import-substitution, and domestic market. The first two should dominate. In order to make the SEZs' industry more outward-looking, some specific measures can be taken, depending on circumstances.

1. There should be continuous development and extension of the export-oriented ventures whose raw materials supply, export channels, and exchange balance can be secured.
2. Support should be given to those ventures which at present have a low export rate and an exchange imbalance, because these can be improved through technical innovation, quality improvement, and cost reduction.

3. Those ventures with a great imbalance in foreign exchange accounts and whose export prospects are poor should be readjusted.

4. Enhancing the Vitality of Enterprises

The present economy of the SEZs is market-oriented. However, it needs to balance the management of enterprises under the state's macro guidance on the one hand, with the advantage of market mechanism on the other hand so as to achieve maximum output with minimum input.

The invigoration of enterprises is the starting point in China's reform and readjustment. According to the regulations of the Party Central Committee on further reforming and invigorating enterprises, the SEZs will sum up their experiences, spread and perfect the manager target responsibility system, and integrate the duty, right, and benefit in micro reform. Enterprises can gradually implement the system of joint-stock, lease, and contract. SEZs should strengthen audit and supervision, separate the ownership and management of a factory, and give more independence to managers.

Currently, with some enterprises facing serious debts and inefficiency, the SEZs will strengthen the management and rectification of the existing enterprises so as to enhance the managers' quality, set and perfect various rules and regulations, and build a large group of major projects and enterprises which are highly competitive and have a good capacity for earning foreign exchange. Thus, China should classify the existing enterprises and guide them. As regards those efficient and well-managed enterprises, their successful experiences will be summed up and spread. The enterprises which are heading in the right direction but have met with some difficulties should be supported and helped. The badly-managed ones should be rectified within a scheduled time, and those unsuccessful enterprises with serious problems and no promising future should be readjusted. With these measures, there will be improvements in profit, exchange earnings, and fund circulation for enterprises in the SEZs, and finally perhaps, reduction and even elimination of enterprise losses.

V. Prospects for the SEZs

In the past seven years, the SEZs' experience has shown that the contradiction between the material and technological bases for an outward-looking economy, including infrastructure and relevant major industries, and the role of display window that the SEZs are expected to play have been existing during the whole process of their economic development. This major contradiction not only determines the direction of the industrial structure but also influences many other contradictions. With the SEZs' economy becoming more outward-looking, some contradictions will be partly or temporarily resolved or alleviated, but some will become more serious. New problems will also emerge.

The development of SEZs can be divided into three periods. On the basis of a comprehensive study of the progress of the SEZs and the changes in the economic environment both at home and abroad, China's SEZs are seen to evolve through three phases.

1. First Period

This covers the first half of the 1980s and involves laying the groundwork for an outward-looking economy.

The main problem in this period is the unsatisfactory investment climate for foreign investment in the newly emerging SEZs. Therefore the major tasks in this period are for the SEZs to put into effect the special policies provided by the central government, to take advantage of their own independence in economic affairs, to build the infrastructure and necessary facilities for life and production by raising funds from many channels, and to bring market mechanism into full play by simplifying administration, decentralizing power to enterprises, and further reform of the old economic system. Thus it will be possible to create an environment favourable to foreign capital introduction, advanced technology, and managerial know-how. It will also be possible to provide some benefits to the whole nation through openness and reform.

2. Second Period

This starts from the mid-1980s to the beginning of the 1990s, when the SEZs' outward-looking economy is in its formative and development stage.

In the initial stage, China's SEZs were generally inward-looking. But they have moved forward, otherwise they could not play the role of display window. With the construction of material and technical bases for their economic development, the SEZs should readjust the old economic structure, in which the industrial proportion is small, industrial level is low, and products are not competitive in the international market. Only in this way can the SEZs' economy become outward-looking. During this second period, the major task is to absorb foreign investment with its enormous export potential and advanced technology, by further improving the investment climate and implementing the preferential policies. SEZs should now exploit and develop some major products which are competitive in the international market, enhance the self-supporting capacity of these products and raise their level of nationalization, strengthen export capabilities, and achieve at least a trade balance, if not some surplus. Simultaneously, the SEZs should develop relevant supporting industries and social services, heighten the ability of absorbing, innovating, and even proliferating the imported technology and management model. In addition, the SEZs should further their economic system reform and set up a flexible economic mechanism in the international market. By and large, in this period the SEZs should focus on increasing exports as their main task and develop an outward-looking economy by taking suitable measures and utilizing various initiatives.

3. Third Period

This covers the beginning of the 1990s to the end of this century, when the outward-looking degree of the SEZs' economy will be heightened and their economy will prosper at all fronts. On the basis of solid industrial foundation, the SEZs in this period should focus on technically innovating the traditional industries and transforming the labour-intensive industries into technology-intensive ones. They should also develop the high-tech industries into prominence in the national economy, and produce an increasing number of high-tech goods to meet the needs at home and abroad. In particular, Shenzhen and Xiamen ought to become economic centres for exchanging information and technology between China and foreign countries. They should make significant contributions to the realization of the strategic ideal of "one country, two systems" and the final reunification of the whole nation.

VI. Comparison between China's SEZs and ASEAN EPZs

As explained earlier, China's SEZs are still at their formative and developing stage. They have some advantages and disadvantages relative to the EPZs and free trade zones (FTZs) of foreign countries including ASEAN. China can learn from these foreign countries, particularly the ASEAN countries. Today China's SEZs are doing research to improve the investment environment and guarantee the sustained, stable, and healthy development of an outward-looking economy. In this section we would like to analyse and compare China's SEZs and ASEAN EPZs.

1. General Comparison

According to *Tax-Free Trade Zones of the World* (Diamond 1985)[10], the ASEAN countries have built or are building a total of 19 free ports, FEZs, EPZs, and transit zones, and they are planning to build 23 more.

Looking at the evolution of ASEAN EPZs and FEZs, all of them, except those in Singapore and Penang, were established and developed during the 1970s, in the wave of EPZs and FTZs emerging in the world. In contrast, China's SEZs came a decade later. Today while China's SEZs are still in their infancy, many ASEAN EPZs have entered a period of stable development or readjustment to a higher level.

ASEAN EPZs are mostly located near ports or industrial and commercial centres with highly developed transportation and infrastructure, including metropolitan cities like Jakarta, Bangkok, and Singapore. EPZs can fully utilize the original facilities and devote their limited funds to building some supporting projects, thus quickly creating a favourable climate for foreign investment. Except for Indonesia's Batam Island and the Philippines' Bataan, the scale of an ASEAN EPZ is also generally small; hence, its construction cost, especially in infrastructure, can be greatly reduced and the construction period shortened, allowing for

an earlier operationalization of the EPZ. But for China's SEZs, the original infrastructure and the base of existing industries are very backward and weak. So from the very beginning SEZs have had to face up to the hard task of creating the basic facilities in transport, water and electricity supply, and telecommunication. Furthermore, creating a favourable environment attractive to foreign investment for the larger-sized Chinese SEZs needs not only a large amount of funds, equipment, and materials, but also a longer period of construction. A large number of managerial personnel have had to be specially trained to qualify for SEZ jobs. After six years of hard work at the initial stage, China's SEZs have created a basic framework. The infrastructure construction has progressed. However, compared with their development objectives and the demands arising from the increasingly competitive international market, these SEZs still have a long way to go.

Though ASEAN countries are diversified in their trade and foreign investment policies, in general their economic systems are capitalistic and closely integrated with the international market. The modernization of economic management in some countries has reached a rather high level. Thus, when the EPZs were set up their economic and management systems were basically co-ordinated with the rest of the country and needed no great adjustments or reforms. But when China develops its outward-looking economy in the SEZs, it has to contend with complicated reforms and adjustments. In the face of pressure from the competitive international market, the SEZs' economic system has to be reformed as quickly as possible. But this process is unavoidably conditioned by the whole country's reform plan and "open-door policy". Therefore it would take a long time for China's SEZs to develop an outward-looking economy which is adapted to a changing world market as well as an economic system which suits the domestic circumstances.

2. Investment Climate

The investment climate is determined by many factors. Whether or not it is favourable depends not only on the zones' own conditions but also on the overall condition in the host country. This includes political stability, material base, legislations, and management efficiency.

Political Climate

Political stability is always the crucial factor for a potential investor to consider before making a decision. For nearly twenty years the political situations in both China and ASEAN have been relatively stable. Thus the security and profit of foreign investment can be assured. With the economic basis becoming constantly stronger and with market potentials fully developed, China and ASEAN will become more and more attractive to foreign investors.

Recently China has become more attractive to foreign investment because economic power has been enhanced with further opening and reform. Moreover, China pursues a "one country, two system" policy towards Hong Kong and Macao and has established, apart from SEZs, open cities and development zones. All these further increase the confidence of foreign investors.

Material Bases

A material base includes natural resources and infrastructure. It is also the precondition for foreign investment. Some ASEAN EPZs have quite a modernized environment with good infrastructure and supporting facilities, while some are improving and modernizing their environment. In contrast, the Chinese SEZ's large size and high expectations have brought some difficulties in perfecting the infrastructure. And due to the limited financial resources, the construction of the SEZs' infrastructure can only be undertaken step by step. It will thus take a long time for Chinese SEZs to improve and modernize their infrastructure, particularly in transport, fuel and electricity supply, communication, and other services to the extent that will meet the foreign investors' requirements.

Policies and Legislations

In the process of establishing the EPZs, ASEAN countries have made explicit regulations and have taken relevant measures that cover the administration and function of port and zone, management and restrictions for both foreign and local ventures, preferential policy and incentives for investment, and the obligations and rights of a venture.

Chinese SEZs have been established in succession since 1980 and much attention has been given since then to making and implementing laws and regulations concerning external economic affairs and especially policies stimulating foreign investments. At present, more than fifty laws and regulations concerning SEZs have been introduced in succession. However, more efforts should be made to supplement, revise, and specify some laws and regulations in the process of their implementation. The present legal system in China is far from perfect and the economic laws and regulations, especially some terms, are not definite enough to meet various kinds of requirements in establishing the market system in the SEZs.

Management Efficiency

Management efficiency may involve many factors, including the efficiency of official organs and information channels, and quality of staff and services. China has much to learn from ASEAN countries in this respect, particularly in the simplification of procedures, stimulation of efficiency, flexible supervision, management approach, vocational training, and professional ethics.

At present China's SEZs have yet to form a co-ordinated and efficient management system. The government is trying to solve this problem by fighting bureaucracy and enforcing some policies, upgrading the quality of government workers through professional training, and reforming administrative organs and personnel systems.

3. Preferential Policies and Incentive Measures

With due regard to national interests, China and ASEAN countries have all implemented some preferential policies to encourage foreign investment.

Land Leases and Charges

In China's SEZs, the tenure of land leases depends on the specific usage. The tenure in Shenzhen, Zhuhai, and Shantou is 20 to 50 years, and in Xiamen it can be 60 years. For ASEAN countries, the tenure in Malaysia is 60 to 99 years, in the Philippines 15 years, in Singapore 30 to 99 years, and in Thailand 3 to 33 years.

China and ASEAN countries have very different charges for utilizing land, warehouses, plants, and buildings. Since 1984 China's SEZs have further reduced the charges for utilizing land. In addition, special favourable treatment is given to investment in industrial, agriculture, stock raising, transport, and fuel supply, and even more specially to the export-oriented and technology-intensive ventures. For ASEAN countries, the utility costs are relatively low in the Philippines and Thailand. So China is competitive in these charges as compared with ASEAN countries.

Labour Cost

Labour cost generally includes wages, social insurance, and welfare. In China's SEZs, some rules stipulate that 70 per cent of the labour cost is wage directly given to workers, 20 to 25 per cent is social insurance, and 5 to 10 per cent is welfare subsidies.

Among the ASEAN countries, labour cost is lowest in Thailand, whose level is near that of China. In Thailand the minimum daily wage is US$1.5 to US$1.75, and the social insurance is 8 to 25 per cent of the labour cost. All the other ASEAN countries have a higher labour cost than China and Thailand. The wage levels of Singapore are the highest, from US$4.8 to US$32 a day.[11]

So judging from the labour cost, China's SEZs have a competitive edge. Besides, foreign-invested, export-oriented ventures and technology-intensive ventures in China do not have to give subsidies, thus further reducing the labour cost. Another factor with equal importance is that in order to fully take advantage of the SEZs' low labour cost, efforts should be made to improve the quality and technical level of workers and management efficiency, and to provide vocational training.

Tax Incentives

Tax incentives are important preferential measures in China and ASEAN. Low tax rates and a tax holiday period will encourage and direct capital to the favoured industries and infrastructure building. Generally the preferences cover duties on the import and export of goods and services, income tax of individuals and enterprises, profit remitting tax, consolidated industrial and commercial tax, local tax, surtax, accelerated depreciation, subsidies, and drawback.

ASEAN and China have preferential duties on imports and exports into and from the EPZs and SEZs. Included are imported machinery, raw materials, spare parts, etc. for producing exported goods, investors' daily necessities, exports of processed and assembled products, and re-exports of the processed imports. But there are variations in preferences and quotas.

The preferential treatment in enterprise income tax and the time limit of inducement also vary with countries. In accordance with the 1984 "Provisional Regulations Promulgated by the State Council of the People's Republic of China on Reduction and Exemption of Enterprise Income Tax and Consolidated Industrial and Commercial Tax for Fourteen Coastal Port Cities, as well as the Four Special Economic Zones and Hainan Island", the income tax rate is 15 per cent in China's SEZs.

> For enterprises engaged in industry, communications and transport, agriculture, forestry and livestock breeding, which have a contract life of ten years or longer, a two-year tax holiday commencing from the first profit-making year, is allowed, followed by a 50% reduction in the three following years (third to the fifth year), upon application and approval by the special zone tax authorities.

The "22 Rules" promulgated in October 1986 provide more favourable treatment to the export-oriented and technology-intensive ventures.

> Following the tax reduction and exemption period, the income tax rate is reduced to 10% to those ventures whose export value is more than 70% of their output.
>
> ...the ventures with advanced technology can have another three more years of 50% reduction of income tax rate, but if the reduced tax rate is less than 10%, then 10% is levied on.

According to the Law of Foreign Investment and relevant corporate tax regulations in Indonesia, the corporate tax rate is progressively increased with income level. Although the tax rate is different from profession to profession, and from income level to income level, generally it is from 15 to 35 per cent and the tax exemption period is from 2 to 6 years.

In Malaysia, both the local and foreign investors are entitled to preferential tax treatment. The corporate tax rate is 40 per cent, and the tax holiday is from 2 to 5 years. Some ventures can enjoy up to 8 to 10 years of tax holiday.

In the Philippines, a progressive corporate tax rate of 25 to 35 per cent is levied on ventures with different income levels. A tax exemption period of 5 years is given to some ventures, and from the sixth to the eighth year the tax rate is reduced by 75 per cent; from the ninth to the tenth year by 50 per cent; from the eleventh to the twelfth year by 20 per cent; and from the thirteenth to the fifteenth year by 10 per cent.

In Singapore the tax exemption period can be extended from 5 to 10 years if the ventures have a large amount of investment or advanced technology. The basic corporate tax rate was reduced from 40 to 33 per cent in 1986.

In Thailand the corporate tax rate of foreign-invested ventures is from 35 to 45 per cent. According to the Foreign Investment Promotion Act of 1972, the tax exemption period is from 3 to 8 years; in the following 5 years the tax rate is reduced by 50 per cent.

In sum, the tax rate in China's SEZs is attractively lower than that in ASEAN's EPZs. But with tax exemption and reduction, ASEAN EPZs provide a more favourable tax treatment to investors.

Foreign Exchange Control and Financing

All the ASEAN countries allow profits to be freely repatriated. Though they have a system of foreign exchange control, approval is readily given for capital to be transferred. Singapore gave up foreign exchange control in June 1978, and now allows free capital movements.

In China, foreign-invested ventures are allowed to exchange foreign currencies among themselves under the supervision of foreign exchange control authorities. Banks provide the foreign-invested ventures with spot exchange, reserve, fixed asset, and liquidity loans. These loans, both in RMB and foreign currencies, are mainly given to well-managed export-oriented and technology-intensive ventures. The investors of these ventures are permitted to remit their profits without being taxed. But China is in no position to pursue a foreign exchange system of free utilization and free conversion as practised in Singapore, so some control and supervision are necessary.

From the foregoing, it can be seen that both China and ASEAN have made great efforts and implemented effective measures to attract foreign capital and improve the investment climate. Generally speaking, China's SEZs are latecomers relative to ASEAN EPZs. But with further opening and reform, the investment climate of China's SEZs will improve and become more competitive. It is well known that the establishment of SEZs is a strategic measure in China's economic opening and reform, aimed at speeding up the modernization process and facilitating economic prosperity. It is not directed against any country's EPZ or FTZ. The emergence of China's SEZs provides the foreign investors another favourable space, thus creating some competition with ASEAN EPZs in trade and investment promotion. This should not be seen in an adverse light as it is a very common phenomenon in the international economy. The real effect of China's economic opening is that the development of Chinese SEZs provides the world, and the Asia-Pacific region in particular, with more opportunities to extend economic ties with China. We believe that, given common interests and complementarity, China and ASEAN can develop their bilateral and multilateral relations on the basis of equality and mutual benefit. The two sides have enormous potentials. It is extremely necessary and of mutual benefit to strengthen co-ordination and co-operation among the Asia-Pacific countries. Holding discussions about policies and measures regarding foreign investment is a good way. ASEAN countries and China should play a more important role and exert a larger influence in promoting economic development and co-operation in the Asia-Pacific region.

APPENDIX TABLE A12.1
China's Coastal Open Zones and Areas

Location and Types	Number	Date of Establishment	Mode and Function
Provincial Level	3		Special policies and flexible measures in economic operation and transaction with foreign countries.
Guangdong Province		1979-89	
Fujian Province		"	
Hainan Province		being established now	
SEZs	4	1980	Special policies and managerial systems; external linkage and internal union; market adjustment; preferential policies; display windows; pivotal functioning for inland development.
Shenzhen			
Zhuhai			
Shantou			
Xiamen			
Coastal Open Cities	14	1984	More autonomy in foreign trade, business, and production; less limits on programmes of foreign investment; more efficiency in external economic affairs; preferential policies introducing advanced technology, and developing new technology and products.
EZTDs	12		
Tianjin, Shanghai			
Dalian, Qinhuangdao			
Yantai, Qingdao			
Lianyunkang, Nantong			
Ningpo, Wenzhou			
Fuzhou, Guangzhou			
Zhanjiang, Beihai			
Coastal Economic Open Zones	3	1985	Adjust industrial structure to the order of trade, industry, agriculture; speed up introducing and renovating; speed up coastal development to bring forth inland development.
Yangtze River Delta			
Zhujiang River Delta			
South Fujian Triangle			

SOURCES: Gu Mu, "Open to the Outside World: A Strategic Decision", *People's Daily*, 24 March 1987; and Economic Management Press, *China's Economic Yearbook 1986* (Beijing, 1986).

APPENDIX TABLE A12.2
SEZs: Location, Year of Establishment, Size, and Development Mode

Location	Year of Establishment	Area (sq. km.)	Development Mode
Guangdong Shenzhen	1980	327.5	Industry as the lead, followed by trade; an outward-looking comprehensive SEZ.
Zhuhai	1980	15.16	Industry as the lead, with the development of commerce and tourism; an outward-looking comprehensive SEZ.
Shantou	1980	52.6	A comprehensive overseas-Chinese hometown SEZ with industry and agriculture as the lead and with a co-ordinating development of the primary, secondary, and tertiary industries.
Fujian Xiamen	1980	131	An outward-looking comprehensive SEZ gradually implementing some free port policies, with the development of industry and then of tourism, commerce, and banking.
Hainan (being established)	1983	33,900	An outward-looking comprehensive SEZ with industry as the lead in a co-ordinating development of the primary, secondary, and tertiary industries.

SOURCES: The Hong Kong Press, *Yearbook of China's SEZs, 1984* (1985); *World Economy Herald* (Shanghai), 14 September 1987; and *Shenzhen SEZ Daily*, 12 January 1988.

APPENDIX TABLE A12.3
SEZs: Basic Data on Progress

Location	Developed Estate	Area (sq. km).	Total Investment in Infrastructure (RMB 100 million)		
			1980–85	1986	1987
Shenzhen	three industrial estates and other commercial and tourist centres and towns	47.6	63.2	19.1	21.5
Zhuhai	three industrial estates	2	13.16	7.3	
Shantou	one industrial estate, an aquiculture and agriculture area, port, and commercial centre	2.28	1.83	6.1	
Xiamen	one industrial estate and an international exhibition city	2.5	2.77	7.0	
		16,000 (sq. m)	17.8 (1981–86)		
Total		60 (1980–85)	80.96	39.5	

SOURCES: Economic Management Press, *China's Economic Yearbook, 1986* (Beijing: 1986); China Statistics Press, *China's Statistics*

APPENDIX TABLE A12.4
SEZs: Investment by Sectors

SEZ	Industries	Output Value of Exports in 1986 (US$100 million)	Employment in 1986 (10 thousands)	Output Value of Industry in 1986 (RMB 100 million)
Shenzhen	*Manufacturing*: electronics, computer repairing, industrial instruments, textiles, clothing, medicine, printing, furniture, and toys. *Preferred technology-advanced items.* *Services*: commerce, tourism, and finance	9.2	25.88	36.7
Zhuhai	*Manufacturing*: electronics, light industry, textiles, building materials, food, furniture, packing materials, and machinery. *Preferred technology-intensive industries.* *Services*: commerce, tourism. *Agriculture*: livestock raising and processing.	4.7	10.61	7.2

Shantou	*Manufacturing*: textiles, toys, decorating materials, and handicrafts. *Agriculture*: export-oriented agriculture and aquiculture. *Services*: commerce, transport, tourism, finance, and real estate.	2.9	87.69	48.9 (including city proper)
Xiamen	*Manufacturing*: electronics, semiconductors and computers, printing, paper products, food, textiles, toys, building materials, plastic products, chemical goods, furniture, and decorating materials. *Services*: tourism, finance.	2.1	25.12	24.7
Total		18.9	149.3	117.6

SOURCES: *China's Economic Yearbook, 1986*, vii, pp. 89, 136–40; and *China's Statistics Yearbook, 1986*, pp. 75–76.

APPENDIX TABLE A12.5
SEZs: Data on Foreign Investment

	Shenzhen	Zhuhai	Shantou	Xiamen	National Total
Investment Agreements (number), 1986	1,299	371	218	245	9,189
Total Agreed Investment (US$100 million), 1986	38.65	14	2.34	4.9	199.91
Actual Investment (US$100 million)	17 (1987)	3.15 (1986)	1.26 (″)	1.69 (1985–86)	83.07 (1986)
Foreign-Invested Ventures	1,299 (1986)	345 (1987)	17 (1985)	280 (1987)	10,008 (1987)
		405 operating (1987)		183 operating	
Internal Union Ventures	255 (1987)	300 (1987)	38 (1986)	620 (1987)	

SOURCES: China Prospect Publishing House, *Almanac of China's Foreign Economic Relations and Trade, 1986* (Beijing: 1986); *China's Statistics Yearbook, 1987*, pp. 75–76, 603–4; *People's Daily*, various issues; *World Economic Herald* (Shanghai), 8 June and 24 August 1987; *Shenzhen SEZ Daily*, various issues; *SEZs and Hong Kong-Macao Economy* (Guangdong, PRC), 2nd issue (1987), p. 43.

APPENDIX TABLE A12.6
SEZs: Cost Structure

Charge Items	Shenzhen	Zhuhai	Shantou	Xiamen
Land				
Tenure (year)	20–50	20–50	20–50	60
Rental (RMB/metre^2/year)	Readjusted every three years; the scope of reduction or increase is within 30 per cent.			Readjusted every five years; the scope of reduction or increase is within 20 per cent.
Industry and stocking	1–16	3–9	5–20	1–12
Commerce and tourism	12–21	30–65	30–140	
Building, lodging houses	5–9	15–30	15–40	
Outside stocking	0.3–0.7	0.5–5		
Agriculture and stock raising	0.2–0.3	0.3–3		
Provisional use	2	2–10		
Annual increase rate of wage labour cost	5–15%			
Composition:				
Wages	70%	70%	70%	70%
Social insurance	25%	25%	25%	20%
Welfare subsidies	5%	5%	5%	10%

APPENDIX TABLE A12.6 (*Continued*)

Items Items	Shenzhen	Zhuhai	Shantou	Xiamen
Standard labour cost (RMB/person/month)	200–300	200	200	120–180
Average monthly wage per person	180–200	140	140	The lowest is 80–120; for manager personnel, 120–180.
Water Charge				
RMB/metre^3	0.18			
HK$/1000 gallon	2.7			
Electricity Charge (RMB/kWh)				
Industry	0.085			
Household	0.2			

SOURCES: *Yearbook of China's SEZ, 1984*; "Rental Adjustment and Rules of Rental Preference and Reduction in Shenzhen SEZ", ibid., pp. 97–98; "Provisional Regulations on Labour Wages for SEZs' Enterprises in Guangdong Province", in *Laws and Regulations Regarding China's Foreign Economic Affairs*, Book 1 (China: The Foreign Press, 1982); "Regulations on Labour Administration for Xiamen SEZ", and "Rental Regulations for Xiamen SEZ", fr. in Reference 6.

APPENDIX TABLE A12.7
SEZs: Preferential Policies and Incentives

Item	Legal Incentives	Preferential Rate (Reduction or Exemption) (In percentage)
Custom duty	Capital goods and raw materials are exempt from import tax. Consumer goods, except tobacco and wine, are exempt from import duty.	100 for both.
	Free export duty	100
Commercial and Industrial Consolidated Tax (CICT)	Free CICT for imported production means.	100
	Free CICT for exported products, except a few controlled ones.	100
CICT rate	3%	
Corporation income tax rate	15%	
Preferential treatment concerning corporation income tax	1. For the ventures engaged in industry, transport, agriculture, forestry, and livestock raising, with an operation period of more than 10 years, no tax is levied during a two-year period after the first profit-making year, and tax is reduced from the third to the fifth years.	100 50
	2. For the ventures engaged in the services sector with investment of more than US$5 million and an operation period of more than 10 years, no tax is levied for the first year after making profit, and the tax is reduced from the second to the third years.	100 50
	3. For the ventures established in the less developed remote regions and with business concerning agriculture and forestry, another 10 years of tax reduction follow.	15–30

APPENDIX TABLE A12.7 (*Continued*)

Item	Legal Incentives	Preferential Rate (Reduction or Exemption) (In percentage)
Other preferential treatment concerning tax and cost	1. No tax for remittance of profit.	100
	2. No charge for utilizing patented technology.	100
	3. No tax for loan interest.	
	4. No local surtax and local income tax (at the discretion of local authorities). No local income tax in Xiamen.	100
	5. If the profits are reinvested for another three to five years, the paid income tax of the reinvested profits could be returned. (The period in Xiamen is stipulated to be longer than three years, and in three other SEZs, longer than five years.)	
Special incentives and policies towards investment	1. Special preferences towards foreign investment a. For the export-oriented ventures with foreign exchange surplus; b. For advanced-technology ventures, which provide advanced technology, develop new products, and upgrade the products to increase export or substitute the imported goods. According to the "22 Rules", the above-mentioned ventures of two kinds can enjoy special preferential treatment in taxes and loans.	

	2. Special preferences are offered to Taiwan compatriots' investments according to the State Council's No. 57 Document issued on 5 April 1983.	
	a. Corporation income tax is exempt from the first to the fourth years, and is reduced from the fifth to the ninth years.	100 50
	b. Thirty per cent of products can be sold on the domestic market.	
	c. There is no land charge from its establishment to the first five years after being operated.	
Investment guarantee	1. Foreign investors' legitimate rights are safeguarded by China, which puts a high value in fulfilling contracts and keeping credit. The divergences concerning contracts will be solved according to the principle of equality, mutual benefit, and friendly consultation.	
	2. Ventures have management independence and can freely choose investment form.	
	3. The income can be remitted freely after being taxed.	
	4. A venture's capital can be withdrawn and remitted freely.	
	5. For business efficiency, the procedure of coming or leaving China is being simplified, and approval ladders are being reduced.	

SOURCES: *Yearbook of China's SEZs, 1984*, Ref. 5; "The Rules of Encouraging Foreign Investment by the State Council", Ref. 10, p. 100; "The Provisional Regulations Promulgated by the State Council of the PRC on Reduction and Exemption of Enterprise Income Tax and Consolidated Industrial and Commercial Tax for Fourteen Coastal Port Cities as well as the Four SEZs", fr. in Ref. 9, pp. 90-93.

NOTES

1. The total industrial output value of the Shenzhen SEZ in 1987 amounts to RMB5.76 billion. Exports of industrial products amounted to RMB3.57 billion, about over half of the total (*People's Daily*, 18 January 1988).
2. The total industrial output value of Zhuhai SEZ in 1987 amounts to RMB1.2 billion, three times more than that in 1986. The total export value amounts to US$2.74 hundred million, three times more than that in 1986. And for the first time, the zone saw a favourable foreign exchange balance, ibid.
3. *Shenzhen SEZ Daily*, 28 February 1986, p. 1.
4. *Shenzen SEZ Daily*, 16 July 1987.
5. *Shenzen SEZ Daily*, 7 January 1987.
6. Some imported instruments such as the mechanical paint gun by Huaqiang-Sanyan Electronics Limited Company (Shenzhen) and the Sony colour TV production line by Huali Electronics Limited Company are of the 1980s international level.
7. The total industrial output value of the four SEZs in 1987 amounts to RMB10.372 billion.
8. *Shenzhen SEZ Daily*, 19 May 1986, p. 4.
9. *Shenzhen SEZ Daily*, 13 February 1987, p. 1.
10. W. H. Diamond and Dorothy Diamond, *Tax-Free Trade Zones of the World* (1985).
11. Ibid.

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